

9. *The Harvest-spiders (Opiliones) of South Africa.*

By R. F. LAWRENCE, B.A., Ph.D., Assistant in Charge of Arachnida.

(With 90 Text-figures.)

THE Opilionid fauna of South Africa as dealt with in this paper is taken to comprise all forms occurring in the South African region, which is that part of the continent below  $17^{\circ}$  south of the equator ; it consists of the Cape Province, which is redivided into western and eastern portions, Natal and Zululand, Orange Free State and Transvaal, South West Africa, parts of Rhodesia, and parts of Portuguese East Africa. In numbers its 90 species compare with other parts of the world as follows : Europe 232, North America 104, South America 581, Africa (South African region excluded) 201, Australia 38.

Several striking features of the South African fauna must be briefly touched upon. Not a single species has been introduced from other countries by shipping or other means of transport ; in the Myriopod fauna, a largely cryptozoic group, von Attems points out that at least 4 common species, some of them very common, have been introduced and become acclimatised along the coastal strip and even farther inland. No species and only 1 genus (*Rhampsinitus*) of the Opiliones has as wide a distribution in South Africa as, for instance, have certain species of the Palpatores group in Europe such as *Phalangium opilio* and *Opilio parietinus*, which range over Europe, Asia, and North America ; the distribution of *Rhampsinitus* extends from the south of the Sahara to the southern extremity of the continent, but all the 29 species are localised. The South African fauna is again peculiar in that it differs sharply from that of the rest of the African continent ; it shows no relationship at all with that of the Ethiopian region. There is a remarkable development of one of the 3 suborders, the Laniatores, which comprises about 74 per cent. (25 genera, 67 species) of the South African fauna, and in this group there is a marked preponderance of one family, the Triaenonychidae, which consists of 21 genera and 59 species or two-thirds of the total fauna. The fauna of the rest of the African continent is more or less equally

divided between the Laniatores and Palpatores, but there is not a single member of the family Triaenonychidae; this family seems to be limited to the southern continents, Australia, Madagascar, Southern Africa, and South America; its greatest development occurs in Southern Africa, Australia coming next in order, and then South America.

The table given below shows the comparative numbers of species of Laniatores as opposed to Palpatores in the different continents:—

	<i>Laniatores.</i>	<i>Palpatores.</i>
Europe . . . . .	14 ( 7 per cent.)	215 (93 per cent.)
North America . . . . .	31 (31 " )	69 (69 " )
Africa . . . . .	88 (59 " )	81 (41 " )
South Africa . . . . .	64 (76 " )	21 (24 " )
Australia . . . . .	33 (87 " )	5 (13 " )
South America . . . . .	555 (95 " )	29 ( 5 " )

This shows that while the Palpatores attain their greatest development in the northern continents, the undoubtedly more highly specialised Laniatores are most strongly established in the southern ones. In this respect Southern Africa, Australia, and South America are more or less in agreement; Africa shows an equal development of both groups owing to its Mediterranean seaboard sharing a number of widespread palaearctic species of Palpatores with the Mediterranean countries and Northern Europe. In one respect the fauna of South Africa differs from that of Australia and South America; no members of the peculiar primitive suborder of Cyphophthalmi have as yet been found in the two latter continents while 2 species are found at the southern extremity of Africa; 3 species are found in tropical Africa.

Since all the South African genera except *Rhampsinitus* are endemic it cannot be said that there is any striking resemblance to any other region, though taking the group as a whole there is a greater relationship with the other southern continents Australia and South America than with the geographically more closely allied Ethiopian region. With regard to the relationships of individual members, the unique family of Acropsopilondae, in which the eyes show enormous development of size, has hitherto been represented only by a single species from Chile; a member of this family, *Oonopsopilio*, from the south-



western corner of South Africa is undoubtedly allied to it. The east coast of South Africa shows undoubted relationship to Madagascar in 1 species of the genus *Acumontia* which had been hitherto supposed to be confined to the island; in the Assamiidae, a family containing most of the Laniatores of tropical Africa, 2 more or less subtropical genera *Namutonia* and *Cryptopygoplus* from South West Africa reveal affinities which link up the South African and Ethiopian regions.

Though many additions will have to be made to the list of Opilionids in South Africa, the Western Cape Province, especially the Cape Peninsula, is comparatively well known; in this respect the eastern half of the Cape Province comes very near to it except those parts between the east of Grahamstown and Natal. Natal and Zululand are but little known and will repay more detailed investigation; the other provinces—Transvaal, Orange Free State, Rhodesia, and South West Africa—are hardly known at all; the following table shows the number of genera and species recorded from the various provinces:—

	W.C.P.	E.C.P.	Natal, Zulu- land.	Trans- vaal, O.F.S.	Rhod.	P.E.A.	S.W.A.
Species . . .	44	31	9	6	3	2	4
Genera . . .	20	13	5	2	3	2	4
Endemic genera	13	5	2	0	0	0	1

The Western Cape shows the greatest number of endemic genera, and this number decreases eastwards; the only 2 species of the small suborder of Cyphophthalmi living in South Africa are found in the Western Cape; the whole family of Triaenonychidae with its 2 subdivisions is confined entirely to the southern provinces, although with more detailed exploration some species are bound to be discovered in the northern ones; at present only 1 genus of Opilionid is found in the northern provinces that also occurs in the southern ones—*Rhampsinitus*; the lack of exploration in the northern provinces is well illustrated by the fact that the Opilionid fauna of the whole area covered by the Transvaal, Orange Free State, and Basutoland is represented by this single genus.

In the Cape Province certain small areas seem to be especially rich in Opiliones; on Table Mountain and its slopes are found no

less than 20 species representing all 3 suborders and all the families except 1 that occur in South Africa ; Knysna represents another rich locality with 10 species, Grahamstown has 9, the Hogsback, Amatola Mountains, 5 species.

Unfortunately practically nothing is known of the habits and life-histories of South African harvest-spiders ; they are in one respect a group easy to collect, for when their hiding places are revealed they make no effort to escape, and even when touched or taken with forceps remain inert ; all the South African forms are slow-moving and for that reason are difficult to detect, especially when, as in all the Adaeinae, they are covered with a thin layer of dirt and grit, which together with the dry-twigg appearance of their appendages make them almost invisible against a gnarled log or earth-covered stone. The long-legged Palpatores of Europe, such as *Opilio*, evidently differ in their habits from our *Rhampsinitus* ; the Palpatores of the older countries seem able to move with more rapidity, and occasionally also enter houses, neither of which can be said of our Palpatores ; it is possible that as a country becomes more densely populated the habits of these animals may be modified and that in Europe the entry of these arachnids into human dwellings accounts for the wide distribution of one or two species ; this is also the case in some spiders such as *Tegenaria* and *Pholcus*. At Hermanus all specimens of *Rhampsinitus littoralis* were found under rusty tins and rotting wooden boxes among the scrub near the shore, a habitat rather unusual for the genus.

In this paper the main lines of classification set out by Dr. C. F. Roewer in his comprehensive and valuable monograph, *Die Weberknechte der Erde*, have been adhered to. My best thanks are due to the author for allowing me to reproduce his descriptions of new species which had already gone to press. The present paper is based mainly upon the collection in the South African Museum accumulated through many years by the late Dr. W. F. Purcell ; of very great assistance has been the material of the Albany Museum, Grahamstown, the loan of which is due to the kindness of its Director, Mr. J. Hewitt ; the work of Dr. G. Rattray and the Rev. R. Godfrey, who have collected much fine material in the Eastern Province, has been of great value. Thanks are also due to the Directors of the Transvaal and Natal Museums for the loan of their collections.

## ORDER OPILIONES.

The Opiliones fall into 3 suborders which can be distinguished as follows :—

1. Openings of the odoriferous glands situated on a conical tubercle on the dorsum of the carapace (fig. 1, *a*); genital opening exposed, not covered by an operculum (fig. 1, *h*) . . . . . A. Suborder *Cyphophthalmi*, p. 345.  
 Openings of the odoriferous glands not situated on a tubercle but at the sides of the carapace; genital opening covered by a movable operculum (fig. 11, *A*) . . . . . 2.
2. Pedipalps powerful, the tarsus provided with a stout grasping claw (fig. 26, *f*); terminal segment of tarsi I and II with 1 simple claw, tarsi III and IV with 2 claws or a trifurcate claw (fig. 16, *c*) . . . . . B. Suborder *Laniatores*, p. 351.  
 Pedipalps slender, antenniform, the tarsus with or without a weak claw (fig. 79); terminal segments of all tarsi with 1 simple claw  
 . . . . . C. Suborder *Palpatores*, p. 468.

### A. SUBORDER CYPHOPHTHALMI Simon.

1923. Die Weberknechte der Erde, C. Fr. Roewer, p. 41.

1904. Two Orders of Arachnida, Hansen and Sorensen, p. 86.

Eyes usually absent (always in South African forms), if present widely separated from each other; openings of the odoriferous glands at the apices of conical tubercles situated on the carapace above the interval between coxae II and III (fig. 1, *a*); pedipalps slender, antenniform, the tarsus with a minute terminal claw (fig. 1, *c*); maxillary lobe of coxa I itself immovable but movable together with the coxa, its chitinous portion not divided; maxillary lobe of coxa II distinct, either movable or only slightly movable together with the coxa; labium absent; sternum either small and triangular or absent (fig. 1, *h*); coxa I movable, coxae III and IV always immovable and fused with each other, coxa II movable or fused with coxa III; leg I longer than II, legs II, III, and IV hardly movable between metatarsus and tarsus; claws of tarsi of legs I–IV simple, not serrate (figs. 1, *d*, *e*); abdomen dorsally consisting of 9 complete and distinct tergites without the anal operculum, and ventrally of 9 sternites; genital opening exposed, not covered by an operculum (fig. 1, *h*); secondary sexual characters present in tarsus IV and in the region of the genital opening, tarsus IV of ♂ with a dorsal process concealing the canal of a gland (fig. 1, *e*), this absent in the ♀; genital aperture in the ♂ hardly longer and usually shorter, in the ♀ many times longer than the distance between genital aperture and coxa III.

One family.

FAM. **SIRONIDAE** Simon.

Two subfamilies.

1. I coxa movable, II, III, IV coxae fused and immovable; maxillary lobes of coxa II longer than broad; second segment of chelicera with a medial row of fine hairs . . . . . Subfam. *Stylocellinae*.
- I and II coxae movable, III and IV coxae fused and immovable; maxillary lobes broader than long; second segment of chelicera with only 1 minute medial hair . . . . . Subfam. *Sironinae*.

The Stylocellinae are not represented in Southern Africa though two genera, *Ogovea* and *Parogovia*, occur in Equatorial Africa.

SUBFAM. **Sironinae** Hansen and Sorensen.

Two genera and two species in South Africa.

*Key to genera.*

1. Odoriferous glands about 6 times as far from each other as from the lateral edge of carapace; tergites closely covered with bead-like granules; trochanter of pedipalp with an inferior process . . . . . *Purcellia*, p. 346.
- Odoriferous glands 2-3 times as far from each other as from the lateral edge of carapace; tergites smooth or with a few very small granules; trochanter of pedipalp without an inferior process . . . . . *Speleosiro*, p. 348.

Gen. **PURCELLIA** Hansen and Sorensen.

1904. Hansen and Sorensen, Two Orders of Arachnida, p. 105.

Eyes absent; odoriferous tubercles (fig. 1, *a*) short, rounded, their basal diameter about a half their distance from the lateral margin of the carapace; chelicerae as in fig. 1, *b*; pedipalp as in fig. 1, *c*, the trochanter with an inferior process; coxa I hardly broader than II and III, about a half as broad as coxa IV; sternum minute; tarsi of legs I-IV one and a half to twice as long as their metatarsi; hair pad absent in tarsus I; tarsi I and II not longitudinally sulcate above; tarsal claws of legs I-IV simple, not serrated; tarsus IV of ♂ 2-jointed, of ♀ 1-jointed.

One species, Cape Province, South Africa.

*Purcellia illustrans* Hansen and Sorensen.

(Text-fig. 1, *a-h*.)

1904. Hansen and Sorensen, Two Orders of Arachnida, p. 106, pl. iii, figs. 4, *a-c*; pl. iv, figs. 1, *a-c*.

We have in the Museum's collection specimens from the following localities in the Cape Peninsula: Newlands, Table Mountain above



Klassenbosch, Grotto Ravine, Platteklip, Devil's Peak, Nordhoek ;  
new locality records are : Stellenbosch, Houwhoek (Caledon division),

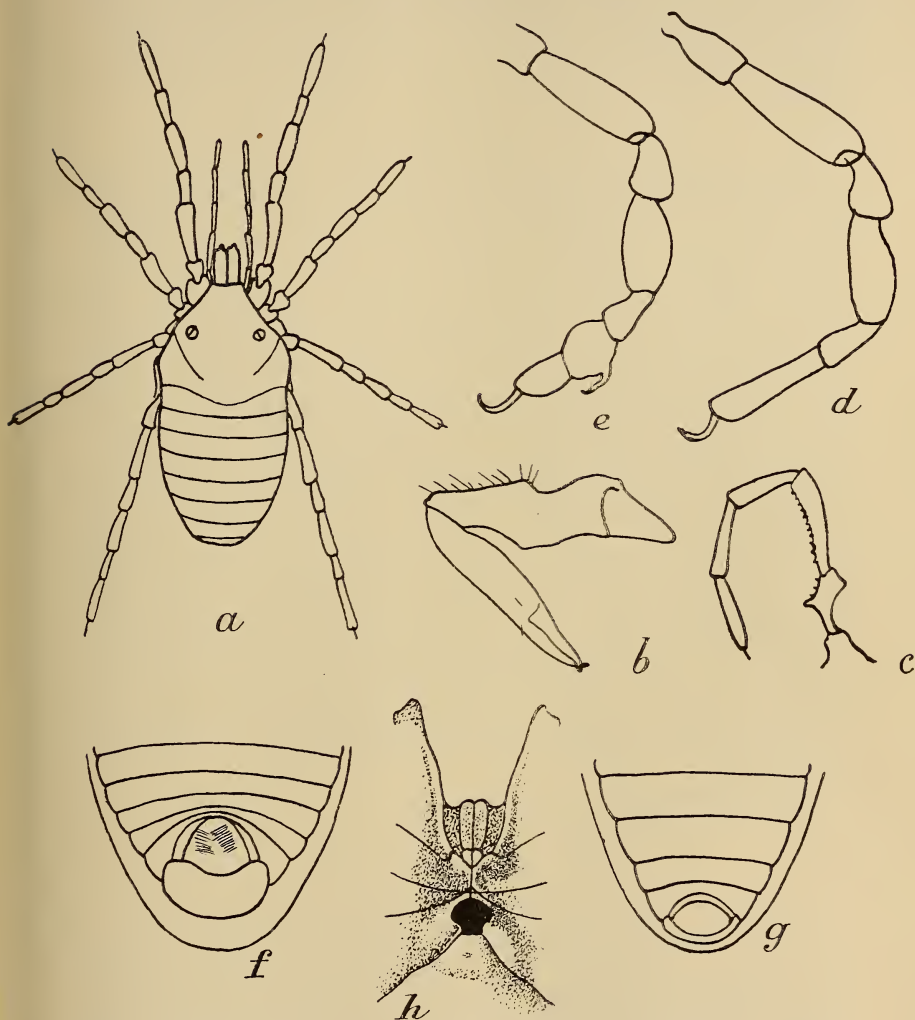


FIG. 1.—*Purcellia illustrans*. ♂: *a*, dorsal surface; *b*, chelicera; *c*, palp; *e*, tarsus IV; *f*, corona analis. ♀: *d*, tarsus IV; *g*, corona analis; *h*, genital opening. (Copied from Hansen and Sorensen.)

Knysna ; specimens from the last three localities agree in all respects with those found on Table Mountain. The habitat of this species is typically cryptic, being always found in damper parts such as ravines

and kloofs where mould is apt to collect ; it lives in damp, decaying leaves or in soil containing a large percentage of vegetable detritus. Hansen and Sorensen in their general account of the Cyphophthalmi describe certain peculiar hairs in this species to which they ascribe a sensory function (*loc. cit.*, p. 36) and also lyriform organs (*loc. cit.*, p. 41).

Gen. SPELEOSIRO n. gen.

Body flattened and oval, pointed posteriorly and anteriorly, more so posteriorly ; body quite distinctly larger than in *Purcellia*, its length  $1\frac{2}{3}$  the breadth (in *Purcellia* it is almost 2) ; chelicerae strongly compressed laterally, length of segment I measured *in situ* from the anterior margin of the carapace  $1\frac{1}{2}$  times the distance of the odoriferous glands from the anterior margin of the carapace (in *Purcellia* these distances are about equal) ; odoriferous glands, when viewed from above, 2-3 times as far apart as they are from the lateral margin of the carapace ; in *Purcellia* they are about 6 times as far apart as from the lateral margin of the carapace ; granulation differing from *Purcellia* as follows : carapace wrinkled and leather-like, with some moderate granules ; tergites, especially those posteriorly, smooth, provided with a few small scattered granules ; coxae and sternites with more numerous regularly placed small granules, a little larger than those of the tergites ; seen with the naked eye the dorsal surface, especially of the abdomen, is smooth and shiny ; in *Purcellia* the granules are much larger, bead-like, and closely packed all over the dorsal and ventral surfaces. Pedipalps longer and more slender than in *Purcellia*, the trochanter without an inferior process. Otherwise as in *Purcellia*.

One species, in caves, Table Mountain.

*Speleosiro argasiformis* n. sp.

(Text-fig. 2, a-d.)

♀. *Colour*.—Dorsum dark brown, the posterior and anterior apices and a marginal border light brown, appendages light brown. Granulation of body as in generic description. Odoriferous tubercles low conical structures, flattened at the top, broader at the base than high, and situated a little nearer to the posterior than to the anterior margin of the carapace, the apertures of the glands opening upwards and a little backwards, a few setae near the tip of the tubercle.

Tergites and sternites as in description of family characters, 8 tergites visible from above as in fig. 2, a ; corona analis as in fig. 2, b.

Pedipalp as in fig. 2, *d*, the segments long and slender, trochanter without process but its inferior distal portion and the whole of femur inferiorly with fine granules; femur and trochanter sparsely clothed

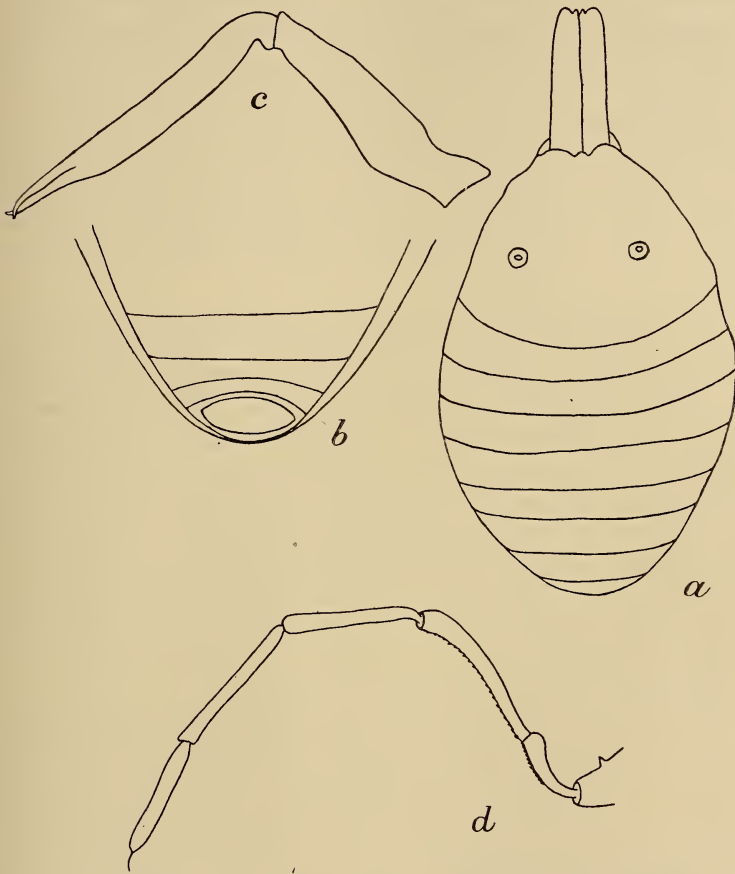


FIG. 2.—*Speleosiro argasiformis*. ♀: *a*, dorsal surface; *b*, corona analis; *c*, chelicera; *d*, palp.

with upright setose hairs; patella, tibia, and tarsus with similar hairs but with a scopula of much shorter, spine-like hairs as well; these, especially on the tarsus, far more numerous than the setose hairs, almost prone and slightly curved.

Chelicera as in fig. 2, *c*, strongly flattened from side to side, slender, movable finger of second segment with about 16 small simple conical teeth followed by 5 larger bicuspid teeth, these decreasing in size

distally; immovable finger with only 7-8 teeth of the bicuspid type; the simple teeth of the movable finger equal in size and quite differentiated from the following 5 molariform teeth; first segment covered with very small scattered granules, a row of short hairs along its dorsal surface, second segment smooth with 2 short setae on its dorsal surface, 1 a little anterior to the middle and 1 just before the insertion of the movable finger; second segment longer than first segment.

Genital opening much as figured by Hansen and Sorensen in the description of *Purcellia illustrans*, Two Orders of Arachnida, pl. iv, fig. 1, *j*; the arculi genitales, however, are larger and project farther inwards and forwards over the genital opening, appearing to be almost distinct and detached from the coxa; they are provided at their tips with some curved setose hairs.

*Legs*.—All tarsi with 1 segment; I tibia  $1\frac{2}{3}$  as long as patella; I tarsus  $1\frac{1}{2}$  times as long as metatarsus and 5 times as long as broad, seen from the side; all segments of leg I except tarsus with both long curved fine-pointed hairs and short hairs; tarsus with a dorsal strip of long curved pointed hairs and a row of 7 modified hairs, these shorter, regularly curved and with blunt tips, corresponding to the modified sensory hairs described in *Purcellia* and other genera by Hansen and Sorensen (*loc. cit.*, p. 37); ventral surface and sides of tarsus with no long hairs but with a brush of very fine, short, close-set hairs.

*Measurements*.—Total length with chelicerae removed 4·7, greatest breadth 2·9; I leg 7·8; chelicera: I segment 2, II segment 2·5 mm.\*

Type, 1 adult female.

Additional specimens, 2 subadult females.†

The subadult specimens are distinctly larger in size than adults of *Purcellia*; they differ from the type in being more granular on the carapace and anterior tergites, especially in the middle; the last 5 tergites seen from above are quite smooth; tergites with a narrow black margination posteriorly, the general colour of the body a dirty olive green; genital aperture closed.

*Measurements*.—Total length 3·7-4, greatest breadth 2·4-2·5. Total length of largest subadult, including chelicerae, 5·2 mm.

These 3 specimens were found in the Wynberg Cave of Table Mountain, one by Dr. K. H. Barnard in 1913, the other two by myself in May 1929. The cave occurs at the top of the mountain in the

\* In any further descriptions, unless the contrary is stated, the total length is taken to mean the distance from the posterior apex of abdomen to the anterior border of the carapace, the chelicerae having been removed.

† For description of male see Appendix, p. 503.



Table Mountain sandstone; the entrance to the caves is tortuous and narrow, and the main body of it where the specimens were found is about 100 feet below the surface, the possibility of any light reaching it being thus precluded; the walls of the main cave are damp and slimy from the water which constantly percolates through fissures in the rocks; the specimens were found under small stones on very damp or even wet sand. The only vegetation seems to consist of a small lichen and the fauna is sparse, the chief representative being the peculiar Acridiid Orthopteron, *Speleiacris tabulae*; another peculiar animal inhabiting the cave is a blind and unpigmented Peripatus, *Peripatopsis alba*. Outside at the mouth of the cave were found specimens of *Purcellia illustrans* in the usual habitat.

## B. SUBORDER LANIATORES Thorell.

1923. Die Weberknechte der Erde, C. Fr. Roewer, p. 55.

1904. Two Orders of Arachnida, Hansen and Sorensen, p. 85.

Two eyes present, usually placed one on each side of a tubercle in the middle of the carapace (Subfam. *Adaeinae*, fig. 58, *a*) or widely separated from each other on the surface of the carapace (Subfam. *Biantinae*, fig. 3, *a*); openings of odoriferous glands not situated on a conical tubercle but near the sides of the carapace above the anterior margin of coxa II; tergites of prosoma not demarcated from each other, fused into a carapace without dividing grooves (fig. 10, *a*); abdomen with 8 tergites, excluding the last the so-called anal operculum, of these tergites only the last 3 free, the first 5 being fused with the carapace to form a single dorsal scute where they are recognisable as I-V or I-IV (where still greater fusion has taken place) areas, these areas may be defined by transverse grooves (fig. 10, *a*); abdomen with 9 sternites, of the first of which only traces are present (arculi genitales), II and III being fused into the stigma-bearing sternite, VIII and IX completely fused into a broad sternite lying in front of the anal opening (fig. 11, *A*); genital opening covered by a movable operculum (*g.o.*, fig. 11, *A*); pedipalps powerful, modified for grasping, tibia and tarsus at least with long seta-tipped spines or with teeth provided laterally with setae (fig. 26, *f*), tarsus with a long powerful terminal claw which at rest can be folded against its under surface; labium distinct, soft; sternum long, narrowed, seldom widening posteriorly (fig. 43); coxa I movable, remaining coxae immovable and fused with each other, coxa IV sometimes strongly developed; leg I shorter than leg II, metatarsus of legs I-IV sometimes (all

Triænonychidae) divided into a basal astragalus and apical calcaneus, these being immovable with respect to each other (fig. 11, *B*); in all South African forms of Triænonychidae with a few exceptions the calcaneus is very much shorter than the astragalus; terminal claws of tarsi I and II always simple and single, those of III and IV usually double or with 3 prongs (trifurcate) (fig. 16, *c*); penis usually long, thin and without muscles, occasionally short, thick and muscular (Triænonychidae); ovipositor short, more or less soft skinned, not annulate; secondary sexual characters of ♂ strongly developed in the armature not only of the body but also of the legs and pedipalp; tarsi of legs divided into a variable number of segments which in legs I and II fall into 2 sections which occasionally consist of 1 but usually of more segments, in legs III and IV the tarsi fall into 3 sections, a basal section with several segments, a median always consisting of 1, and an apical consisting always of 2 segments bearing the 2 claws or trifurcate claw; above these claws the tarsus is sometimes prolonged into a pseudonychium or false claw; the divisions between the sections of the tarsus in adult animals always remain deeper and more distinct than those between the segments which themselves compose the sections; metamorphosis either slight or quite distinct.

The suborder is divided into 6 families.

*Key to families of Laniatores.*

1. The last 4 tergites free and not coalesced . . . . . 2.  
 Only the last tergite, the operculum anale, freely movable, remaining tergites coalesced to form a dorsal scute . . . . . *Oncopodidae*.
2. III and IV tarsus with 2 true claws, these simple or serrated . . . . . 3.  
 III and IV tarsus with 1 trifurcate claw in adults (fig. 16, *c*), or in juveniles with 1 claw which bears a variable number of small lateral teeth  
*Triænonychidae*, p. 366.
3. Pedipalps carried crossed over in the region of the patellæ, with weak armature; inferior frontal margin of carapace with 5 (2:1:2) forwardly projecting conical teeth (fig. 5, *g*) . . . . . *Assamiidae*, p. 357.  
 Pedipalps not carried crossed over but directed forwards; inferior frontal margin of carapace, although sometimes drawn out into sharp angles at the sides and centre, not armed with 5 conical teeth (fig. 42, *b*) . . . . . 4.
4. III and IV tarsus each with a pseudonychium . . . . . 5.  
 III and IV tarsus without a pseudonychium . . . . . *Phalangodidae*, p. 353.
5. Pedipalps weak, the femur tibia and tarsus broadly flattened and keeled, all segments of pedipalp unarmed, not strongly spined . . . . . *Cosmetidae*.  
 Pedipalps strong, the femur not flattened, tibia and tarsus stout and rounded, at most only flattened ventrally between the strong spines of tibia and tarsus . . . . . *Gonyleptidae*.

Three of these families are found in South Africa, the *Phalangodidae*, *Assamiidae*, and *Trienonychidae*. The *Oncopodidae* is a small family confined to South-East Asia, while the *Cosmetidae* and *Gonyleptidae* occur in South America and the southern part of North America.

#### FAM. PHALANGODIDAE Simon.

For a summary of the family characters see :

1923. Die Weberknechte der Erde, C. Fr. Roewer, p. 64.

The family has a practically world-wide distribution; 3 subfamilies occur in Africa.

#### Key to subfamilies of Phalangodidae.

1. Femur of leg I not spined . . . . . 2.  
    Femur of leg I spined . . . . . *Erecananinae*.
2. Eyes raised on a distinct tubercle, pedipalps short and stout, III and IV tarsus without a scopula . . . . . *Phalangodinae*.  
    Eyes not raised on a tubercle but placed wide apart on the carapace (fig. 3, a); pedipalps very long and slender (fig. 3, b), III and IV tarsus with a thick scopula . . . . . *Biantinae*, p. 353.

Of these only the *Biantinae* occur in South Africa. The *Phalangodinae* is much the largest subfamily, consisting of about 40 genera distributed throughout the Old and New Worlds; of these 3 are found on the Guinea coast of West Africa, 1 in British East Africa, and 1 in the Seychelles. The *Erecananinae* is a small subfamily consisting of 2 genera, one of which is found in Java (*Lomanius*), the other (*Eerecanana*) in East Africa.

#### SUBFAM. Biantinae Roewer.

1923. Roewer, Die Weberknechte der Erde, p. 128.

The subfamily contains 10 genera, most of which are African; 1 genus, *Metabiantes*, is found in South Africa.

The genus *Spinibiantes* was created for Pocock's species *Hinzuanus leighi* by Roewer, 1915, Arch. Naturg., lxxxi, A, fasc. 3, p. 177. The generic descriptions as given by him in Die Weberknechte der Erde, pp. 133-140, for *Metabiantes* and *Spinibiantes* are, however, almost word for word identical, the only character really differentiating the two being the presence in *Spinibiantes* of a pair of median spines (*Dorn-Paar*) on the III and IV areas of the dorsal scute, while in *Metabiantes* these are absent with the exception of two tropical species, *filipes* and *jeanneli*, in which these areas bear enlarged granules

(Körnchen). In the specimens of *Metabiantes* (*Spinibiantes*) *leighi* I have examined, from Port Shepstone, Natal, Zululand, etc., these spines or teeth vary from a small size hardly larger than the surrounding granules to distinctly defined sharp teeth which are quite noticeably prominent; the only character then which separates *Metabiantes* from *Spinibiantes* is the size of the teeth or enlarged granules on the III and IV areas, and this itself is a variable character. It seems highly probable that *Spinibiantes leighi* and *Metabiantes jeanneli* from East Africa are related or even that *jeanneli* is only a variety of *leighi*. I therefore propose to drop the genus *Spinibiantes* and to include its 1 species, *S. leighi*, in *Metabiantes*; from a survey of the 70 odd specimens in the collection of the Museum it appears that the whole genus *Metabiantes* is a homogeneous one with few characters that sharply divide the species, some of those used in Roewer's key being of little diagnostic value; the sigmoid curvature of the IV femur, for instance, is a character of doubtful specific value, there being a certain but variable amount of curvature in all specimens I have examined.

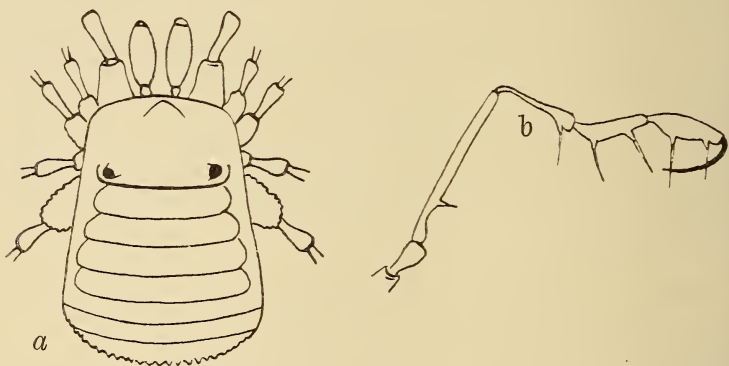


FIG. 3.—*Metabiantes*. a, dorsal surface (granulation not shown); b, palp. (Copied from Roewer.)

#### Gen. METABIANTEs Roewer.

(Text-fig. 3, a-b.)

1923. Die Weberknechte der Erde, C. Fr. Roewer, p. 133.

Frontal margin of carapace in the middle with or without a low rounded process; dorsal scute divided by transverse grooves into 5 areas, the III and IV of which may be armed with a median pair of



enlarged granules or teeth; stigmæ hardly visible; chelicera with segment I swollen dorsally at its distal extremity; pedipalp: femur with 1 spine inferiorly in its basal third, patella with 1 spine inferiorly near distal apex, tibia and tarsus with 2 spines on each side inferiorly; legs with tarsal segments I, 3; II, 5; III, 5; IV, 5; secondary sexual characters developed in leg II or IV.

Four species, confined to the eastern half of Southern Africa.

### Key to species.

1. Areas I-IV closely and irregularly granular with no transverse row of enlarged granules . . . . . *meraculus*, p. 355.  
Areas I-IV closely and irregularly granular with either a transverse row of enlarged granules, or areas III and IV with a pair of distinct median spines 2.
2. Areas III and IV with a median pair of enlarged tooth-like spines *leighi*, p. 356.  
Areas III and IV without a median pair of tooth-like spines but with a transverse row of slightly enlarged granules, these sometimes limited to a median pair . . . . . 3.
3. Femur of pedipalp below with 2 spines near its base (fig. 4, c), segment I of chelicera uniformly granular above (fig. 4, b) . . . . . *maximus*, p. 356.  
Femur of pedipalp below with 1 spine near its base, segment I of chelicera more or less smooth above . . . . . *pusulosus*, p. 355.

The South African species as distinguished above are not very clear-cut forms; the species tend to grade into each other.

### *Metabiantes meraculus* Loman.

1898. Loman., Zool. Jahrb. Syst., ii, p. 522.

One specimen which appears to belong to this species, the label bearing the words "no history"; there is, however, no seta (*borst*) in the anterior third of the femur of either this or any other specimen of *Metabiantes* in the collection of the South African Museum.

### *Metabiantes pusulosus* Loman.

1898. Loman., Zool. Jahrb. Syst., ii, p. 522.

The South African Museum has specimens from Doornek, Alexandria Division (5 individuals); Knysna (8); Dunbrody, Uitenhage Division (3); Grahamstown (11); Kaapmuiden, E. Transvaal (3); Addo Bush (1); Inchanga, Natal (1); Rietvlei, Umvoti District (1); Krantskop, Natal (3); Pietermaritzburg, Natal (1). The Albany Museum, Grahamstown, has it from Blytheswood (8); Alicedale (7);

East London (1); Grahamstown (1); Somerville (10); Port Alfred (5); Hogsback, Amatola Mountains (1).

*Metabiantes leighi* Pocock.

*Hinzuanus leighi*.—Pocock, Proc. Zool. Soc., pt. 2, p. 412 (1902).

*Spinibiantes leighi*.—Roewer, Die Weberknechte der Erde, p. 140.

The South African Museum has specimens from Umtata (1); Manubie Forest (1); Kentani (6); East London (1); Durban (6); Delagoa Bay (3); Amanzimtobi, Natal (1); Mfongosi, Zululand (5); Port Shepstone (5); Masiene, near Limpopo River (2); Krantzkop, Natal (1); Port St Johns (1). The Albany Museum, Grahamstown, has it from East London (11).

*Metabiantes maximus* n. sp.

(Text-fig. 4, a-c.)

*Colour*.—Yellow-brown.

Carapace, dorsal scute, tergites closely and uniformly covered with shiny round granules; carapace with granules smaller than those on the remainder of dorsum; anterior lateral angles of carapace with a row of about 9 small granules; areas I-IV well defined, with 1 or 2 seta-tipped granules in the middle a little larger than the rest but with no definite row of enlarged granules; area V with a row of granules definitely a little larger than remaining granules, free tergites I and II with 1 row of slightly enlarged granules their anterior thirds matt, free tergite III covered with granules but without an enlarged row; dorsal scute with 2 lateral rows of granules, the outer one regular the inner a little less so; sternites with 2 distinct rows of small granules at the sides, these rows hardly visible in the middle; inferior surfaces of coxae with scattered granules, coxa III with an anterior and posterior row of distinct reddish granules.



FIG. 4.—*Metabiantes maximus*. a, chelicera from the side; b, segment I of chelicera from above; c, femur and patella of palp.

Pedipalp as in fig. 4, c, femur below near the base with 2 spines, these smaller than in other species, patella below with an apical spine weaker than in other species, remaining segments as in other species;

chelicera large and strong (figs. 4, *a*, *b*), segment I above regularly but not thickly covered with small granules, seen from the side as in fig. 4, *a*, anterior surface of segment II with an irregular row of low rounded granules. Legs: II and IV stronger and longer than I and III, tibia and metatarsus of II without a row of small sharp granules (female ?); tarsal segments 3:5:5:5.

*Measurements*.—Length of body 4·2, chelicerae I+II, 1·5+2·2, pedipalps (trochanter-tarsus) 4·2 mm.

Type, 1 ♀, Somerville, Eastern Cape Province. Type in Albany Museum, Grahamstown.

# FAM. ASSAMIIDAE Sorensen.

For a summary of the family characters see:

1923. Die Weberknechte der Erde, C. Fr. Roewer, p. 215.

Three subfamilies are known, two of which—the *Trionyxellinae* and *Assamiinae*—occur in the South African region.

## Key to subfamilies.

1. III and IV tarsus with a pseudonychium (fig. 5, *e*)

Subfam. *Trionyxellinae*, p. 357.

III and IV tarsus without a pseudonychium Subfam. *Assamiinae*, p. 360.

# SUBFAM. Trionyxellinae Roewer.

1923. Roewer, Die Weberknechte der Erde, p. 215.

Two tropical West African genera, *Pungoica* Roewer and *Pungoiella* Roewer, belong to this subfamily; only one genus, *Namutonia*, is found in the South African region.

## Gen. NAMUTONIA n. gen.

Tarsi III and IV with large blunt spur-like pseudonychium, claws simple (fig. 5, *e*). Tarsi I and II with each 3 segments, tarsi III and IV with each 4 segments. Ocular tubercle low, the eyes far apart (three times their largest diameter) and surrounded by a pigmented area; tubercles of body themselves covered with fine granules; femur of pedipalp armed with 5 strong teeth below; legs unarmed.

One species—South West Africa.

*Namutonia scabra*, n. sp.

(Text-fig. 5, a-g.)

Body yellow, eyes surrounded by black rings (fig. 5, c, seen from above and a little from behind); area surrounding ocular tubercle with fairly dense and irregular tubercles; tubercles of body of different sizes, the 5 (2:1:2) on the lower frontal margin of the carapace much the largest and conical (fig. 5, g); next in size are the tubercles constituting the enlarged transverse rows of the free tergites, then those of the fused area; all tubercles themselves covered with fine granulation and tipped with a seta which usually projects backwards and mesially, the interspaces of the tubercles filled up with minute granules but these much less dense than on the areas described as "matt." Ocular tubercle seen from the side as in fig. 5, d; dorsal scute divided into quite well-defined areas thickly covered with tubercles arranged in 2 or 3 rather irregular transverse rows, the interspaces filled with smaller tubercles; lateral borders of fused area with smaller tubercles; I and II free tergites with their anterior halves occupied by 2 rows of tubercles the anterior of which is composed of small, the posterior of large tubercles; their posterior halves devoid of tubercles but with fine matt granulation; III free tergite with tubercles arranged in more or less irregular rows, more than 3 deep, the posterior ones largest. Sternites with their anterior  $\frac{2}{3}$  forming a thickly tuberculate band, the tubercles homogeneous in size and smaller than those of the tergites; remaining posterior  $\frac{1}{3}$  with matt granulation; all coxae below thickly covered with small tubercles, IV with 3 club-shaped tubercles along posterior distal margin and 3 smaller anterior ones more proximally situated, II with 3 club-shaped tubercles at posterior distal apex, the anterior margin bordered with a row of enlarged tubercles, I with a tricuspid tubercle along lower anterior margin in the middle; genital operculum matt, with a few granules.

Pedipalp seen from the outer side as in fig. 5, a; trochanter with 1, femur with 5 strong teeth below with accessory lateral setae; femur with a strong spine-like tooth at its inner distal apex (not seen in fig.) which projects horizontally at right angles to the longitudinal axis of femur; patella with 1 (2) outer, and 2 strong inner teeth; outer side of tibia spined as in fig. 5, a, inner side with 3 small spines alternating with 2 much longer ones; inner side of tarsus spined as in outer side; chelicera with first segment as in fig. 5, f. Tarsal segments I, 3; II, 3; III, 4; IV, 4; terminal segment of tarsus IV with pseudonychium as in fig. 5, e; pseudonychium of tarsus III considerably smaller than in IV.



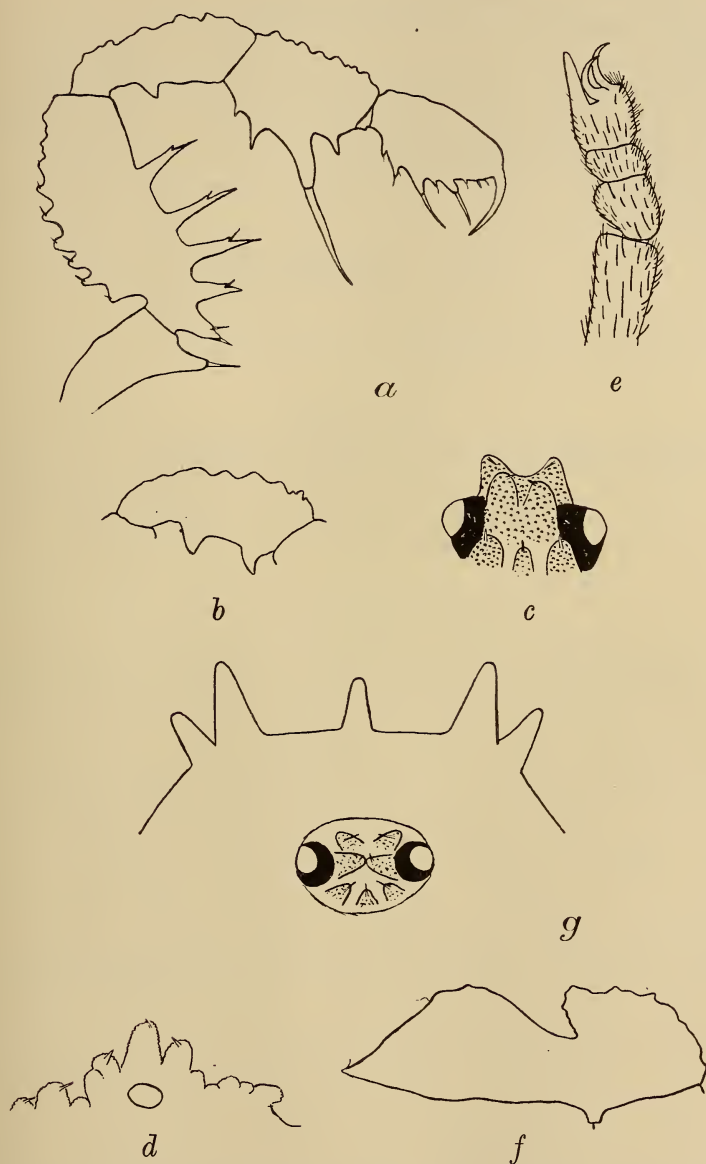


FIG. 5.—*Namutonia scabra*. a, palp from outer side; b, patella of pedipalp from inner side; c, ocular tubercle from above; d, from side; e, tarsus IV; f, chelicera, segment I; g, anterior margin of carapace from above.

*Measurements.*—Length of body 3-3.5 mm.

Types, 6 specimens (sex ?) from Okorosave, Kaokoveld, South-West Africa.

Other specimens: Grootfontein, Damaraland, South West Africa (1); Namutoni, Damaraland, South West Africa, (1); Kunene River, Ovamboland, South West Africa (3).

I have been unable to distinguish sexual characters in these specimens.

SUBFAM. **Assamiinae** Roewer.

1923. Roewer, Die Weberknechte der Erde, p. 236.

Two genera in South Africa.

*Key to genera.*

1. Tarsus I consisting of 4 segments, tarsus II of 5 segments

*Polycoryphus*, p. 365.

- Tarsus I consisting of 5 segments, tarsus II of 10 segments

*Cryptopygoplus*, p. 360.

Gen. **CRYPTOPYGOPLUS** n. gen.

Most resembling the genus *Wintonia* from Australia, see Roewer's key to the genera of *Assamiinae* (*loc. cit.*, p. 236). Tarsus I with 5, II with 10 segments, the terminal section of the latter consisting of 3 segments; ocular tubercle transversely oval, convex but not prominent, unarmed but with about 25 granules scattered irregularly over it; no median tooth on the anterior border of carapace but the area between the ocular tubercle and the anterior margin of the carapace convexly rounded; granulation of body consisting of stout, sometimes club-shaped granules, themselves finely granular and tipped with a seta; areas of fused portion of carapace, four in number, clearly defined by transverse grooves, bearing definite but rather irregular transverse rows of granules; granules on fused portion of carapace not so markedly different in size as in the case of *Wintonia* (fig. 271, p. 247, *loc. cit.*); stigmatae not visible; femur of pedipalp with a ventral row of teeth which are shorter or hardly longer than the diameter of the femur seen from the side; legs long and slender, unarmed but finely granular; coxa IV anteriorly near its base without an enlarged spine; claws of tarsi III and IV simple; tarsal segments I, 5; II, 9-11; III, 6; IV, 7.

Three species in South Africa.

Key to species.

1. Anterior surface of segment II of chelicera with a stout tooth near its distal apex (fig. 8, b) . . . . . *rhodesianus*, p. 363.  
Anterior surface of segment II of chelicera without a tooth near its distal apex . . . . . 2.
2. Free tergites with more than 1 complete transverse row of granules, femur of pedipalp with 1 stout triangular tooth at its distal inner apex (fig. 6, b) . . . . . *africanus*, p. 361.  
Free tergites with only 1 complete transverse row of granules, these larger than those of the other segments, femur of pedipalp with 2 spine-like teeth at its distal inner apex (fig. 7, c) . . . . . *damaranus*, p. 362.

*Cryptopygoplus africanus* n. sp.

(Text-fig. 6, a-e.)

Colour yellowish-brown, fused portion of carapace blackish; anterior border of carapace without a median tooth in front of ocular



FIG. 6.—*Cryptopygoplus africanus*. a, ocular tubercle from side; b, femur of palp from inner side; c, apex of femur from below; d, tibia and tarsus of palp; e, chelicera.

tubercle; ocular tubercle as in fig. 6, a, seen from the side, broader than long, distinctly demarcated from the rest of the carapace, covered with about 25 small round granules; some granules behind and at the sides of the ocular tubercle; area containing the ocular tubercle separated from the remainder of the fused area by a procurved groove, the first area bordered posteriorly by a recurved groove, the second one by a straight groove, the last two by slightly procurved grooves; the 4 areas with fairly close and regularly set granules about 3 rows

deep, the granules of the middle row the largest; dorsal scute bordered at the sides and posteriorly by a coarsely granular strip separated from the areas by a distinct groove which is without granulation; free tergites bordered anteriorly by 2 rows of granules in I and II, by 3 rows in III; sternites weakly granular in anterior  $\frac{2}{5}$ , fine matt in posterior  $\frac{3}{5}$ ; coxae inferiorly irregularly granular, coxa IV below with a row of 4 club-shaped granules along its posterior margin almost meeting at an angle a row of 5 similar granules at the side of the stigma-bearing sternite, a patch of blackish granules along its anterior side above.

*Pedipalp*.—Trochanter with 1 large and 1 small tooth below, femur as in fig. 6, *b*, seen from the inner side, with a row of 11 teeth below and a large tooth apically on the inner side; patella with 2 long teeth ventrally on the inner side, 1 on the outer side; tibia and tarsus as in fig. 6, *d*, showing outer row of teeth, inner row of both segments consisting of 3 small teeth alternating with 2 large long ones as in tarsus of *C. damaranus* (fig. 7, *b*).

*Chelicera*.—Segment I dorsally with the distal raised surface covered with rounded granules (fig. 6, *e*), 1 or 2 of those on the outer side distally, enlarged, ventral surface granular; segment II shiny, anterior surface with a patch of small tooth-like granules basally on the outer and inner sides; tarsal segments I, 5; II, 9–11; III, 6; IV, 7.

*Measurements*.—Total length of body 4.9 mm.

Types and genotypes, 2 specimens (males?) from Inhambane, Portuguese East Africa

*Cryptopygoplus damaranus* n. sp.

(Text-fig. 7, *a–e*.)

*Colour* yellow, fused portion of carapace slightly infuscated, tarsi almost white; this species differs from the preceding one chiefly in the granulation of the fused portion of the carapace; the granulation of the body is less dense, those in the neighbourhood of the ocular tubercle are larger, the 4 areas of the fused portion of carapace are not so distinctly divided; areas III and IV are provided with a row of enlarged granules and some other smaller ones not arranged in regular transverse rows; the free tergites and posterior border of fused portion of carapace without several rows of smaller round granules but bordered posteriorly by a single transverse row of enlarged conical granules; lateral margin of fused portion of carapace



bordered by a strip of weak granules very much smaller than those in the middle of the carapace; sternites matt with a single distinct anterior row of small round granules.

Pedipalp as in figs. 7, *a*, *b*; femur seen from the inner side with 9 ventral teeth a little longer than the diameter of the femur; on the inner side at apex 2 teeth with their inner axes almost at right angles to the axes of the ventral teeth (fig. 7, *c*), seen from below; patella, tibia, and tarsus seen from below with the teeth on the outer side of these segments as in fig. 7, *b*, the teeth on the inner side not drawn; patella on inner side with 2 teeth (fig. 7, *d*), tibia and tarsus both with teeth



FIG. 7.—*Cryptopygoplus damaranus*. *a*, chelicera; *b*, palp from inner side; *c*, femur of palp from below; *d*, patella of palp from above; *e*, ocular tubercle.

on inner side similar to those on the outer side of tarsus, viz. 3 small ones alternating with 2 large long ones.

Chelicera as in fig. 7, *a*, segment I with the dorsal surface of raised distal portion covered with granules, at the sides matt, a few granules below; segment II shiny with a few granules basally on its inner surface. Legs unarmed; tarsal segments I, 5; II, 10; III, 6; IV, 7.

*Measurements*.—Total length 3.6 mm.

Types, 3 specimens (males?) from Kaoko Otavi, Kaokoveld, South West Africa. Other specimens: 2 from Okorosave, Kaokoveld; 1 from Tsumeb, Damaraland, South West Africa.

*Cryptopygoplus rhodesianus* n. sp.

(Text-fig. 8, *a*–*b*.)

*Colour* yellowish-brown, some of the granules round the ocular tubercle infuscated black; granules behind and at the sides of the ocular tubercle fairly large, tipped with setae which are directed forwards and medially; areas I–IV and free tergites with 2 rows of

granules the posterior row enlarged, the posterior row of the free tergites consisting of larger granules than those of the posterior rows of areas I-IV; sternites shagreened with a row of small granules nearer to their posterior than to their anterior border; coxae irregularly granular, coxa IV at its posterior distal border with a row of 4 enlarged club-shaped granules which is opposed to a similar row at the side of the stigma-bearing sternite.

*Pedipalps*.—Trochanter with 1 large, 1 small tooth below, 1 small tooth above; femur with a row of 9-11 teeth below, 2 inner apical teeth, one long and spine-like, the other close to it, much smaller; patella with 2 long spines on inner, 1 shorter one on outer side; tibia with teeth arranged proximo-distally as follows: outer side—



FIG. 8.—*Cryptopygoplus rhodesianus*. *a*, chelicera; *b*, apex of anterior surface of segment II.

3 short, 1 long, 1 short; inner side—1 short, 1 long, 2 short, 1 long, 1 short; tarsus similarly on both sides with 2 short, 1 long, 2 short, 1 long, 1 short.

*Chelicerae*.—Segment I as in other species, segment II shiny, with some spine-like teeth basally on the inner side; near distal apex on the inner side there is a stout pear-shaped tooth on the anterior surface just above the insertion of the immovable finger of the claw (figs. 8, *a*, *b*); this tooth is quite absent in the other species.

Tarsal segments I, 5; II, 8; III, 6; IV, 7.

*Measurements*.—Total length 3.2-3.6 mm.

Types, 4 specimens from Umtali, Rhodesia (3 males, 1 female?). The chelicerae of the specimens I take to be ♂♂ are in this genus larger than those of the ♀♀. In one of the smaller specimens of *C. rhodesianus*, which is presumably a ♀, the II leg is much longer in proportion to the remaining legs than in the ♂♂. There is no large tooth on the chelicerae.

Gen. POLYCORYPHUS Loman.

1902. Loman, Zool. Jahrb. Syst., xvi, pp. 188, 195.

1923. Roewer, Die Weberknechte der Erde, p. 274, fig. 290.

Ocular tubercle in middle of carapace, coarsely and irregularly tuberculate; upper frontal margin of carapace in front of ocular tubercle with 1 median conical tooth; dorsal scute a little constricted opposite the III coxa, broadening again posteriorly; area I without a median longitudinal groove; all areas and free tergites with very coarse tubercles and with a median pair of tubercles a little more prominent than the rest; operculum anale with one median spine; stigmatae hidden under the teeth filling up the cleft between coxa IV and the stigma-bearing sternite; coxa IV laterally at its base without 1 large tooth; segment I of chelicera distinctly swollen at its dorso-distal extremity; femur of pedipalp with 1 spine medially at its apex, inferiorly with a row of ventral teeth which are shorter than its diameter; legs stout, femora of III and IV with sigmoid curvature; terminal section of tarsus II with 2 joints; tarsal segments I, 4; II, 5; III, 5; IV, 5.

One species in South Africa.

*Polycoryphus asper* Loman.

(Text-fig. 9.)

1902. Loman, Zool. Jahrb. Syst., xvi, p. 195, Taf. 9, fig. 14.

1923. Roewer, Die Weberknechte der Erde, p. 274, fig. 290.

*Colour*.—Body and appendages reddish yellow, a dorsal median band and legs I-IV reticulate with black.

Ocular tubercle and anterior margin of carapace as in fig. 9; carapace, dorsal scute, and I-III free tergites coarsely and irregularly tuberculate; areas I-V and I-III free tergites with a slightly more prominent median pair of tubercles in addition, these directed posteriorly; operculum anale with 1 median spine; all free sternites coarsely granular; surfaces of coxae I-IV and latero-dorsal surface of coxa IV coarsely granular; dorso-distal swelling of I segment of chelicera and all segments of pedipalp dorsally with coarse granulation; legs unarmed except trochanters I-IV posteriorly, which are armed with 2-3 teeth; tarsal segments I, 4; II, 5; III, 5; IV, 5.

Length of body 4.5, pedipalps 2.5; legs I-IV, 7 : 10 : 8 : 12 mm.



FIG. 9.—*Polycoryphus asper* Loman. Ocular tubercle.

Type, 1 ♀ from Port Elizabeth; Roewer records 1 ♀ and 1 juvenile from Cape Town. This species is not present in the Museum's collection, and though the Cape Peninsula has been more thoroughly searched for Opiliones than any other part of South Africa this form has as yet not been discovered by local collectors.

#### FAM. **TRIAENONYCHIDAE** Sorensen.

For a summary of the family characters see :

1923. Die Weberknechte der Erde, C. Fr. Roewer, p. 585.

This family contains the very great majority of South African Laniatores and these are grouped in 2 subfamilies, the *Adaeinae* and *Trienonychinae*; a third subfamily, the *Trienobuninae*, is confined to Australia.

#### *Key to subfamilies.*

- |   |   |   |   |                                 |
|---|---|---|---|---------------------------------|
| 1. Shape of sternum as in fig. 16, <i>b</i> | . | . | . | <i>Trienonychinae</i> , p. 366. |
| Shape of sternum as in fig. 43              | . | . | . | <i>Adaeinae</i> , p. 424.       |

#### SUBFAM. **Trienonychinae** Pocock

1902. Pocock, Ann Mag. Nat. Hist., ser. 7, x, p. 512.

1923. Roewer, Die Weberknechte der Erde, p. 586.

Pocock separated the 2 South African subfamilies *Trienonychinae* and *Adaeinae* on the basis of two characters, viz. the shape of the sternum, and the stigmata which were exposed in the *Trienonychinae* and hidden in the *Adaeinae*; the first-named character is the only one which holds good for differentiating the two groups; it is quite constant and in itself is enough to distinguish a *Trienonychid* from an *Adaeinid*; the stigma may be exposed in genera occurring in other parts of the world, but as far as the 13 South African genera are concerned the exceptions are more numerous than the rule, the stigmata being exposed in only 2 of them—*Austronuncia* and *Speleomontia*; as a rule there are large conical granules forming a bridge over the gap between coxa IV and the stigma-bearing sternite, the stigma-bearing sternite being often reduced and partly hidden beneath the bridging granules. The *Trienonychinae* are in general distinctly smaller in body size than the *Adaeinae* and include all the smallest members of the family; the body length varies between 2 and 4.5 mm., that of the *Adaeinae* between 4.5 and 7.6 mm., *Micradæum* excepted. In many



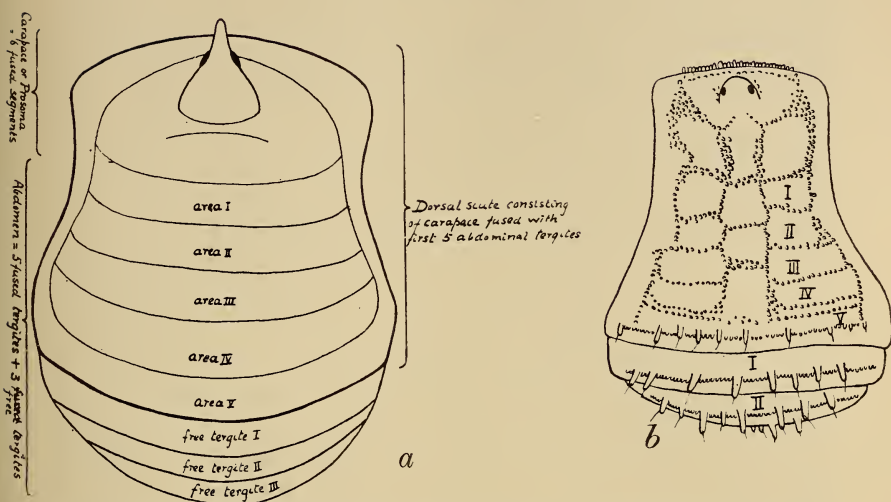


FIG. 10.—Dorsal segmentation of Triaenonychidae. *a*, *Rostromontia* (Triaenonychinae); *b*, *Cryptadaeum* (Adeinae).

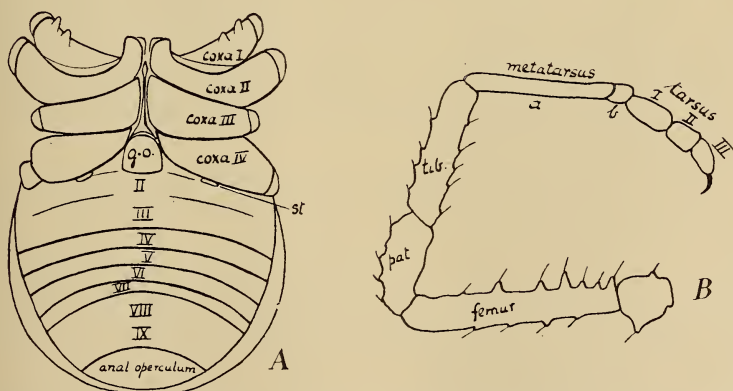


FIG. 11.—*A*, ventral surface of Triaenonychidae, *Rostromontia*; II-IX sternites, II-III fused, forming stigma-bearing sternite, IV-IX free sternites; *g.o.*, genital operculum; *st.*, stigmata (hypothetical, actually hidden under coxa IV). *B*, leg I of *Rostromontia*, metatarsus divided into: *a*, astragalus; *b*, calcaneus; I-III, tarsal segments.

of the genera the first coxa is provided at its anterior distal margin with 2 large and prominent conical tubercles which may be bifid or simple; with this character is associated a strip of fine bead-like granulation on the ventral surface of the femur of the pedipalp which extends its whole length in the middle and is flanked on its outer side by a row of enlarged teeth, the basal one of which is sometimes bifid and enlarged; on the inner side of the median strip is a row of much smaller teeth or granules which are sometimes reduced and almost obsolete; these characters do not occur in 5 genera—*Mensamontia*, *Austronuncia*, *Graemontia*, *Acumontia*, and *Speleomontia*; here instead of 2 conical tubercles the anterior margin of coxa I is provided with a row of 4–6 much slenderer conical or papilliform teeth tipped with setae, these being not essentially different in form from those found on the ventral surface of the pedipalp and the femur of leg I; in these genera there is no strip of fine bead-like granulation in the middle of the ventral surface of the pedipalp femur and the spines on all the segments of the pedipalp are much longer and are tipped with long stout setae. In all genera except *Roeweria* and *Speleomontia* the lateral prongs of the claws of tarsi III and IV are subsidiary in size and length to the main median prong; in the above-mentioned genera the reverse is the case. In all genera except 3 the calcaneus of metatarsi I and II is much shorter than the astragalus; in *Cryptobunus* and *Biacumontia* the calcaneus is longer than or only a little shorter than the astragalus; in *Austromontia* it is shorter than the astragalus but not so short as in other genera. In about half the genera the dorsal scute is fused into one piece without transverse grooves dividing it into areas.

The sexes are best distinguished by the size and spination of the pedipalps; in the males these are much larger and stouter than in the females; the outer teeth on the ventral surface of the femur, when these are present, are larger in the males, but those on the ventral surface of tibia and tarsus are on the contrary larger in the females; these teeth in the females are more prominent than in the males, tipped with setae and with other stout setae between them; the teeth on these segments in the males are irregular and granuliform; in some genera (*Rostromontia*, *Ceratontia*) the spine or process of the ocular tubercle is longer in the male than in the female; the femur of the first leg if armed inferiorly is armed in both sexes. On page 424 is a table of characters of South African genera of *Triazenonychinae*.

Thirteen genera occur in South Africa.

## Key to genera.

1. Inferior surface of pedipalp femur with a strip of fine granulation in the middle (fig. 23, *e*), flanked on the outer side with a row of stout triangular teeth, remaining segments of pedipalp armed with smaller teeth; coxa I below with 2 tubercles along its anterior margin, the distal one usually bifid (fig. 23, *c*) . . . . . 2.  
 Inferior surface of pedipalp femur without a strip of fine granulation in the middle, all segments of pedipalp with numerous equal-sized long conical spines tipped with long and powerful setae (fig. 37, *e*), coxa I below with 4-5 or more spines along its anterior margin similar to though smaller than those of the pedipalp (fig. 37, *f*) . . . . . 9.
2. Tarsus I with 2 segments . . . . . 3.  
 Tarsus I with 3 segments . . . . . 4.
3. Tarsus II with 3 segments, calcaneus of metatarsus I much shorter than astragalus . . . . . *Ceratomontia*, p. 370.  
 Tarsus II with 4 segments, calcaneus of metatarsus I at least  $\frac{1}{2}$  the length of astragalus . . . . . *Biacumontia*, p. 403.
4. Tarsus II with 3 segments . . . . . *Monomontia*, p. 416.  
 Tarsus II with more than 3 segments . . . . . 5.
5. Tarsus II with 4 segments . . . . . *Austromontia*, p. 398.  
 Tarsus II with more than 4 segments . . . . . 6.
6. Tarsus II with 8-9 segments, median prong of claws of tarsi III and IV weaker than the lateral claws . . . . . *Roeweria*, p. 384.  
 Tarsus II with 5 segments, median prong of claws of tarsi III and IV stronger than the lateral claws . . . . . 7.
7. Calcaneus of metatarsi I and II longer than astragalus (fig. 28, *f*) . . . . . *Cryptobunus*, p. 396.  
 Calcaneus of metatarsi I and II much shorter than astragalus (fig. 25, *b*) . . . 8.
8. Dorsal scute not divided into areas by transverse grooves, anterior margin of carapace with a row of round club-shaped granules (fig. 23, *a*) . . . . . *Amatola*, p. 386.  
 Dorsal scute divided into areas by transverse grooves (fig. 24, *a*), anterior margin of carapace without a row of round club-shaped granules . . . . . *Rostromontia*, p. 388.
9. Tarsus I with 3 segments . . . . . 10.  
 Tarsus I with more than 3 segments . . . . . 11.
10. Granules behind and at the sides of the ocular tubercle arranged in rows forming a symmetrical pattern (fig. 37, *c*) . . . . . *Graemontia*, p. 413.  
 Granules behind and at the sides of the ocular tubercle irregularly disposed (fig. 20, *a*) . . . . . *Mensamontia*, p. 381.
11. Tarsus I with 4 segments . . . . . *Austronuncia*, p. 411.  
 Tarsus I with 5 segments . . . . . 12.
12. Dorsal scute armed (fig. 41, *a*), ocular tubercle with a single terminal spine . . . . . *Acumontia*, p. 420.  
 Dorsal scute unarmed (fig. 42, *a*), ocular tubercle rounded and low . . . . . *Speleomontia*, p. 422.

## Gen. CERATOMONTIA Roewer.

1923. Roewer, Die Weberknechte der Erde, p. 619, fig. 778, a-g.

Carapace narrower than dorsal scute; ocular tubercle situated in anterior third of carapace, with or without a median spine; areas I-V, free tergites I-III, and operculum anale unarmed but with 1 or 2 transverse rows of granules; coxa I below with 2 large tubercles along its anterior margin; stigmatae hidden. Pedipalp: femur below, often with a large bifid tooth on the outer side near its base, a longitudinal strip of fine granulation in the middle; inferior surface of femur of leg I armed with conical granules in both sexes; calcaneus of all legs much shorter than the astragalus; terminal section of leg I with 1, II with 2 segments; tarsal segments 2:3:3:3; median prong of claws of tarsi III and IV much stronger than the lateral prongs.

Ten species, Cape Province.

*Key to species.*

1. Femur of palp with a longitudinal row of 10-11 teeth above (fig. 89) *wernerii*, p. 505.  
     Femur of palp with a longitudinal row of at most 5 teeth above (fig. 17, d) 2.
2. Areas of dorsal scute with 1 row of granules . . . . . *tabulae*, p. 371.  
     Areas of dorsal scute with 2 rows of granules . . . . . 3.
3. Chelicerae without large teeth on dorsal surface of segment I (fig. 18, g) . . . . . 4.  
     Chelicerae with large teeth on dorsal surface of segment I . . . . . 5.
4. Anterior margin of carapace with 4 granules on each side of ocular tubercle (fig. 18, f), granules on areas I-III of dorsal scute irregularly disposed *irregularis*, p. 378.  
     Anterior margin of carapace with 2 granules on each side of ocular tubercle, granules on areas of dorsal scute in 2 regular rows . . . . . *capensis*, p. 375.
5. Ocular tubercle drawn out into a pointed spine 5-6 times as long as diameter of eye (fig. 13, a) . . . . . 6.  
     Ocular tubercle not drawn out into a spine, terminal process short or absent . . . . . 7.
6. Segment II of chelicerae with a thickened tubercle above the immovable claw (fig. 88) . . . . . *cheliplus*, p. 504.  
     Segment II of chelicerae without a thickened tubercle above the immovable claw . . . . . *fluvialis*, p. 372.
7. Largest tooth on dorsal surface of pedipalp trochanter greatly exceeding the largest tooth on dorsum of femur (fig. 15, e), dorsal surface of segment I of chelicerae with 2 large teeth in the middle (fig. 15, a) . . . . . *minor*, p. 374.  
     Largest tooth on dorsal surface of pedipalp trochanter hardly exceeding or smaller than the largest tooth on dorsum of femur (fig. 14, a), dorsal surface of segment I of chelicerae with 1 or 0 large teeth in the middle (fig. 14, d) 8.
8. Anterior margin of carapace with 3 granules on each side of ocular tubercle, free tergite I with a transverse row of about 8 indistinct granules not reaching the sides of the segment . . . . . *hevitti*, p. 376.



- Anterior margin of carapace with 2 granules on each side of the ocular tubercle, free tergite 1 with a transverse row of about 20 large distinct granules reaching the sides of the segment . . . . . 9.
9. Dorsal surface of segment I of chelicerae with an upright tooth in the middle (fig. 14, *d*) . . . . . *karrooensis*, p. 373.
- Dorsal surface of segment 1 of chelicerae with a hooked process near distal apex (fig. 19, *g*) . . . . . *setosa*, p. 379.

*Ceratontia tabulae* n. sp.

(Text-fig. 12, *a-e*.)

*Colour*.—Carapace and ocular tubercle yellow with black reticulate markings, dorsal scute behind carapace with a median black stripe, posterior border of dorsal scute and free tergites with a transverse black band; appendages yellow with fine black reticulate markings. Anterior upper margin of carapace with 4 granules (2 on each side); ocular tubercle (fig. 12, *a*), seen from the side, with a few scattered granules; all areas of dorsal scute with only 1 transverse row of granules on a matt background composed of minute granules; all free



FIG. 12.—*Ceratontia tabulae*. *a*, ocular tubercle; *b*, femur of palp below; *c*, from inner side; *d*, from above; *e*, chelicera.

tergites with similar rows of granules; sternites matt with 1 or 2 rows of small granules; coxae smooth, coxa I distally on anterior border with 2 conical teeth, the more distal one compound, behind these a row of 4–5 small shiny granules; coxa II with 4 granules along its posterior distal margin. Pedipalp: femur seen from above (fig. 12, *d*), with a large hooked tooth at its inner apex, 4 teeth above (fig. 12, *c*), below with a row of 5 large teeth on the outer side, a strip of bead-like granules mesially to this row (fig. 12, *b*); chelicera unarmed (fig. 12, *e*). Femur of leg I with 4 seta-tipped conical granules inferiorly; tarsal segments I, 2; II, 3; III, 3; IV, 3.

*Measurements*.—Total length 2.2 mm.

Types, 4 specimens from St James, Cape Peninsula. Other specimens from Newlands, Hout Bay, Simonstown, Platteklip Ravine, Kalk Bay, all Cape Peninsula.

*Ceratomontia fluvialis* n. sp.

(Text-fig. 13, a-f.)

Colour light yellowish brown, some blackish markings behind ocular tubercle, a median blackish stripe down tergites; anterior margin of carapace with 3 enlarged granules on each side, region behind ocular tubercle with some irregular granules arranged in 2



FIG. 13.—*Ceratomontia fluvialis*. a, ocular tubercle; b, femur of palp from outer side; c, tibia and tarsus of palp from below; d, femur of palp from below; e, chelicera; f, femur of leg I.

short strips; ocular tubercle seen from the side (fig. 13, a), with a single drawn out upwards and forwardly projecting process; free segments not easily distinguished from fused area; dorsal scute behind carapace divided into 4 areas by transverse grooves, each area with an anterior or middle row of large granules and a posterior row of small granules; posterior margin of dorsal scute and free tergites each with 1 row of larger tubercles which may be doubled at the sides; sternites with 0 or 1 row of small granules. Pedipalp seen from the outer side (fig. 13, b), trochanter with 0 teeth below, 1 large tooth above, femur with 5 spines above; seen from below as in fig. 13, d; outer side below

flanked by a fairly close-set row of teeth including 1 bifid basal tooth, a well-defined strip of fine granulation mesially to this outer row of teeth; patella unarmed, tibia and tarsus seen from below and a little from the outside as in fig. 13, *c*; chelicera as in fig. 13, *e*, the I segment long, reaching to further than half the length of femur of pedipalp. Legs: coxa I with 2 sharp tubercles along its anterior margin, II with a double row of granules at its distal posterior apex, III with 1 or 2 granules at anterior distal apex, IV with a double row of granules at anterior distal apex; femur of leg I as in fig. 13, *f*; tarsal segments of I slender, of II much longer than broad; tarsal segments I, 2; II-IV, 3.

*Measurements*.—Pedipalps 6.5; length of body 4.5, breadth 3 mm.

Type, 1 specimen (♂ ?) from Riversdale Mountains, Cape Province.

*Ceratomontia karrooensis* n. sp.

(Text-fig. 14, *a-e*.)

*Colour* yellow. Dorsal scute with rows of granules crowned with setae in the middle of each area smaller than the similar granules of the free tergites; in addition, areas of dorsal scute bordered posteriorly with shiny bead-like granules; upper anterior margin of carapace with 2 seta-tipped granules on each side of the ocular tubercle; ocular tubercle seen from the side as in fig. 14, *e*, its posterior surface with some shiny round granules, the region just posterior to the ocular tubercle with a double longitudinal row of round shiny granules on each side; sternites finely granular, each with 2 transverse rows of small seta-tipped granules, their posterior edges not bordered by granules. Pedipalp as in fig. 14, *a*, seen from inner side; trochanter with 2 superior teeth, 1 moderate and 1 small, 1 inferior tooth; femur above with 5 teeth, below with about 6 teeth on outer side, the large basal one bifid, a row of 6 denticles on the inner side, between these rows a row of bead-like granules which is doubled in its distal half; patella, tibia, and tarsus seen from below as in fig. 14, *c*, the ventral surface of tibia between the outer and inner teeth slightly concave and filled with smooth low granules which tend to form indistinct transverse rows. (Chelicera as in fig. 14, *d*.) Legs: coxae below smooth, I with 2 small tubercles anteriorly at its distal apex, posterior distal apex of II with 3-4, anterior distal apex of IV with 3 granules; tarsal segments I, 2; II-IV, 3.

*Measurements*.—Total length 2.8 mm.

Type, 1 specimen from Montagu, Cape Province.



FIG. 14.—*Ceratomontia karrooensis*. *a*, femur of palp from inner side; *b*, from below; *c*, patella—tarsus of palp from below; *d*, chelicera; *e*, ocular tubercle.

*Ceratomontia minor* n. sp.

(Text-fig. 15, *a-e*.)

*Colour* light greenish yellow, carapace infuscated blackish at the sides and behind the ocular tubercle, dorsal scute infuscated in the middle and at the sides, free tergites transversely infuscated. Dorsum finely granular, the areas of dorsal scute with a transverse row of seta-tipped granules in the middle and a posterior border of round shiny bead-like granules; ocular tubercle seen from the side as in fig. 15, *e*, a few shiny granules on its posterior side; upper anterior margin of carapace with 2 seta-tipped granules on each side; free tergites



with a row of granules in the middle as in the areas of the dorsal scute but without a row of bead-like granules posteriorly; sternites finely granular but not bordered posteriorly. Pedipalp: femur and trochanter seen from the side armed as in fig. 15, *e*; seen from below femur armed along its outer edge with 1 large bifid tooth basally and 5 other much smaller teeth; inner side with 4 small rounded teeth; between these rows a double row of small bead-like granules with some other similar granules scattered near them (fig. 15, *d*); tibia seen from below as in fig. 15, *b*, consisting of a concave surface filled with small



FIG. 15.—*Ceratomontia minor*. *a*, chelicera; *b*, tibia and tarsus of palp from below; *c*, ocular tubercle; *d*, femur of palp below; *e*, femur of palp from side.

indistinct granules and flanked on each side by a row of moderate-sized teeth. Chelicera as in fig. 15, *a*; segment I with 2 large subequal teeth above. Legs: surfaces of coxae below smooth, coxa I with a few granules and a pair of conical tubercles anteriorly at its distal apex; tarsal segments I, 2; II–IV, 3.

*Measurements*.—Total length 2.3 mm.

Type, 1 specimen from East London.

#### *Ceratomontia capensis* Roewer

(Text-fig. 16, *a–g*.)

1923. Roewer, Die Weberknechte der Erde, p. 619, fig. 778, *a–g*.

The following is Roewer's description of the types:—

*Colour*.—Body and all appendages rusty yellow. Body and ocular tubercle armed as in fig. 16, *a*; areas of dorsal scute with 2 transverse rows of granules; all free sternites with traces of a row of granules at

the sides; genital operculum smooth; surfaces of coxae I-IV smooth; coxa I with an anterior row of 4 tubercles, III with 1 posterior and 1 anterior row, IV with 1 posterior row of tubercles; chelicera unarmed and smooth as in fig. 16, *e*; pedipalp seen from inner and outer sides as in figs. 16, *g, f*; legs powerful, trochanters I-IV coarsely granular; femora I-IV with rows of granules; tarsal segments I, 2; II, 3; III, 3; IV, 3; secondary sexual characters of ♂ present in I leg in

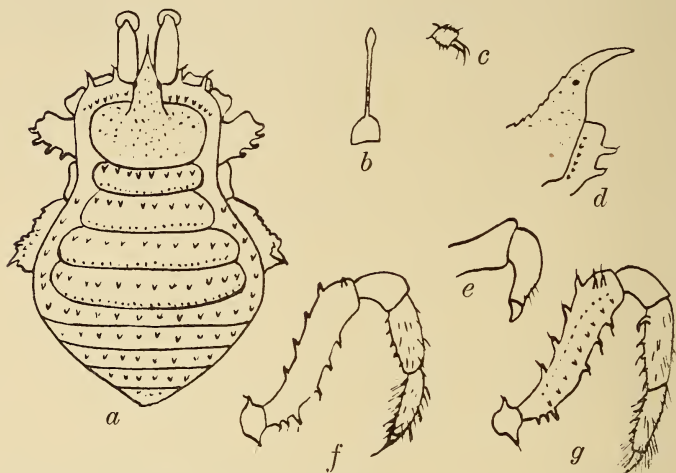


FIG. 16.—*Ceratomontia capensis*, Roewer. *a*, dorsal surface of body; *b*, sternum; *c*, claw of tarsus IV; *d*, ocular tubercle; *e*, chelicera; *f*, palp from outer; *g*, from inner side. (Copied from Roewer.)

which the femur is provided ventrally near its base with 3 blunt tubercles; calcaneus normal in the ♂.

*Measurements*.—Length of body 3, pedipalps 4; legs I-IV, 5:8:6:9 mm.

Types, 2 (♂♀), 2 pull. Port Elizabeth. Collected Roewer.

*Ceratomontia hewitti* n. sp.

(Text-fig. 17, *a-f*.)

♂. *Colour*.—Yellow brown speckled with black.

Dorsum with a background of small fine granules; anterior margin of carapace with 3 stout conical seta-tipped granules on each side of the ocular tubercle (fig. 17, *c*), a similar granule at the antero-lateral angles of carapace; ocular tubercle as in fig. 17, *c*, the terminal process

fairly short and blunt, 1-2 large conical granules laterally at the base of the ocular tubercle; area posterior to ocular tubercle with about 6 round granules not arranged in 2 longitudinal rows; areas with 2 rows of granules, a middle one consisting of enlarged seta-tipped granules and a posterior one consisting of minute round granules; area V and free tergites with only 1 row of enlarged seta-tipped granules; sternites with 2 indistinct rows of small granules; coxae below smooth and shiny.

Pedipalp: femur above with 5 strong more or less equal-sized teeth, these smaller than the larger of the 2 teeth on the dorsal surface of

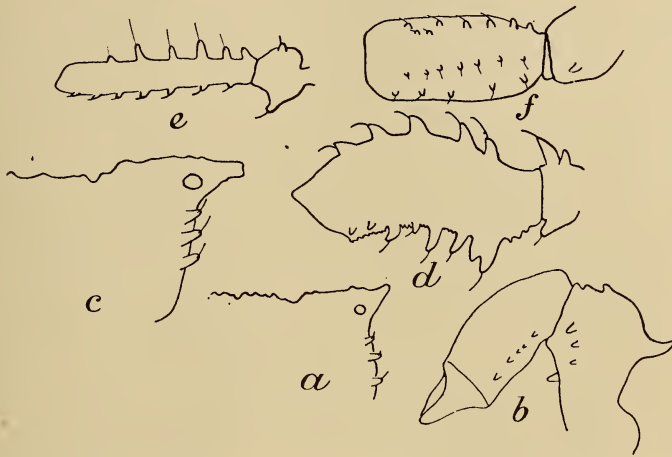


FIG. 17.—*Ceratomontia hewitti*. a, ocular tubercle of ♀; b, chelicera; c, ocular tubercle; d, femur of palp from outer side; e, femur of leg I; f, tibia of palp from below, all of ♂.

trochanter (fig. 17, d); below on outer side with a bifid basal tooth and 4 other smaller teeth; outer surface of femur smooth, inner surface matt granular with a stout triangular tooth near upper apex; patella with a small tooth on inner side near apex, tibia as in fig. 17, f, seen from below, a row of about 9 stout seta-tipped granules on outer side, inner side with 2 rows; tarsus with a large triangular semi-divided tooth basally on the outer side followed by 4 much smaller teeth, inner side with 3 teeth; chelicera as in fig. 17, b, femur of leg I as in fig. 17, e, femora of remaining legs unarmed; tarsal segments 2:3:3:3.

*Measurements*.—Total length 2.2, pedipalps 3 mm.

♀. As in ♂ with the following differences: ocular tubercle shorter,

the 3 granules along the anterior margin of carapace smaller (fig. 17, *a*); the genital operculum proportionately wider than in ♂, the pedipalps considerably shorter in proportion to the body. Femur of leg I armed as in ♂.

*Measurements*.—Total length 2, pedipalps 2.1 mm.

Types, 9 ♂♂, 5 ♀♀, Alicedale, Eastern Cape Province. Types in Albany Museum, Grahamstown.

*Ceratontia irregularis* n. sp.

(Text-fig. 18, *a-g*.)

*Colour*.—Body and legs dark, almost black, pedipalps brown, sternites with a lighter median longitudinal stripe.



FIG. 18.—*Ceratontia irregularis*. *a*, femur of palp from outer; *b*, from inner side; *c*, tibia and tarsus of palp; *d*, femur of leg I; *e*, ocular tubercle; *f*, anterior margin of carapace from above; *g*, chelicera.

Grooves defining the areas deep and very distinct, passing right across the dorsal scute to meet the lateral grooves; anterior margin of carapace with 4 large conical seta-tipped granules on each side of the ocular tubercle (fig. 18, *f*, seen from above); ocular tubercle seen



from the side as in fig. 18, *e*, the sides thickly granular, its posterior surface fairly smooth in the middle; area posterior to ocular tubercle with scattered round granules, a strip in the middle smooth; areas of dorsal scute with coarser granules than in other species, those of areas I–III irregularly disposed, more than 2 deep, not forming 2 distinct rows but the larger and smaller granules intermixed; area IV with an anterior row of larger conical granules, a posterior row of small round granules; area V with a single row of larger granules, free tergites I–II with 1 row, III with 2 rows of larger seta-tipped granules; sternites with 2 rows of small round granules, those of the anterior row larger, some of them tipped with short white setae; inferior surfaces of coxae smooth and shiny with a few scattered white setae, coxa I with 2 small granuliform tubercles on its anterior margin, the distal one bifid.

Pedipalp: femur below on outer side with 3 teeth, the 2 basal ones large, the third small (fig. 18, *a*), inner side below as in fig. 18, *b*, with 4 small round granules, inferior surface of femur between these rows without the usual median strip of minute granules, at most rugose; patella unarmed except for a small granule on inner side below, tibia below with an outer row of 5 distinct granules (fig. 18, *c*), an inner row of 3, tarsus on outer side as in fig. 18, *c*, inner side with 3 large teeth alternating with 3 smaller teeth; chelicera as in fig. 18, *g*, segment I without a dorsal tooth; femur of leg I armed as in fig. 18, *d*, remaining femora unarmed; tarsal segments 2 : 3 : 3 : 3.

*Measurements*.—Total length 3, breadth 2·7, pedipalps 3·2 mm.

Type, 1 (♀ ?), Stones Hill, Grahamstown. Type in Albany Museum, Grahamstown.

Another specimen from Grahamstown has a median pair of granules in each area of dorsal scute slightly enlarged.

*Ceratontia setosa* n. sp.

(Text.-fig. 19, *a–h*.)

♂. *Colour* light brown with ramifying black streaks, a vertebral blackish stripe on dorsal scute tapering posteriorly, free tergites blackish in anterior half.

Anterior margin of carapace with 2 large conical seta-tipped granules on each side of the ocular tubercle; ocular tubercle above with coarse round granules seen from the side as in fig. 19, *b*; area posterior to the ocular tubercle with 4 enlarged conical granules in the middle forming a square; areas with 2 regular rows of granules, an anterior one consisting of enlarged conical granules of which the

middle pair are a little larger than the remaining ones, a posterior one consisting of small round granules; area V with a single row of larger granules; free tergites matt, I-II with 1 row, III with 2 rows of enlarged granules; all the larger conical granules of dorsal surface tipped with white setae, the regular and close-set rows of setae giving the animal a hirsute appearance; sternites with 2 rows of seta-tipped small round granules; coxae smooth and shiny with scattered white

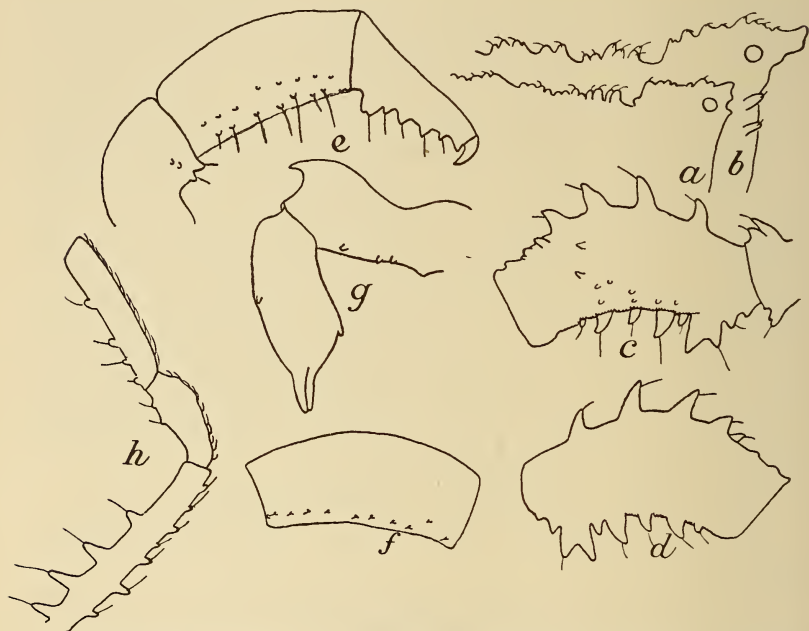


FIG. 19.—*Ceratomontia setosa*. *a*, ocular tubercle, ♀; *b*, ocular tubercle; *c*, femur of palp from inner; *d*, from outer side; *e*, patella-tarsus of palp from outer side; *f*, tibia of palp from inner side; *g*, chelicera; *h*, leg I, all of ♂.

setae, coxa I with 2 teeth along its anterior margin, the proximal one larger and rounded, the distal one bifid.

Pedipalp: femur as in fig. 19, *c*, seen from inner side, trochanter with 2 teeth on upper surface, the larger one not exceeding the largest of the 4 teeth on dorsal surface of femur, seen from outer side (fig. 19, *d*), inferior outer side with a large basal bifid tooth and 4-5 smaller teeth, a median strip of fine granulation flanked on inner side by some low round granules; patella below on outer side with 2, on inner side with 1 small granule; tibia on outer side as in fig. 19, *e*, on inner side as in fig. 19, *f*; tarsus on outer side as in fig. 19, *e*, inner side with

4-5 teeth; chelicera without a dorsal tooth in the middle of segment I but as in fig. 19, *g*; leg I with femur, patella, and tibia as in fig. 19, *h*; remaining legs unarmed but fairly densely covered, especially in distal segments, with short white hairs, those on tarsal segments of legs II-IV long and slender; tarsal segments 2:3:3:3.

*Measurements*.—Total length 2.8, pedipalps 3.2 mm.

♀, with ocular tubercle as in fig. 19, *a*, seen from the side, terminal process shorter than in ♂; anterior margin of carapace with 3 conical granules on each side of ocular tubercle (not shown in fig. 19, *a*); white setae on sternites and coxae more numerous than in ♂; patella of pedipalp below with a larger inner tooth than in ♂; tibia on inner side below with an irregular double row of granules, the outer of these consisting of 5 fairly large tooth-like granules, outer side with a single row of about 9 granules larger than those of the ♂; tarsus on inner side with 3 larger alternating with 2 smaller teeth, outer side with 4 or 5 teeth, the basal one large and divided at the tip; genital operculum proportionately broader than in ♂; granulation of body, armature of leg I, pedipalp, femur, etc., as in ♂.

*Measurements*.—Total length 2.6, pedipalps 2.8 mm.

Types, 1 ♂, 1 ♀, Goqwana, Tsolo, Eastern Cape Province. Types in Albany Museum, Grahamstown.

#### Gen. MENSAMONTIA n. gen.

Enlarged granules of the dorsal scute and free tergites moruliform and surmounted with a small curved claw-like seta (fig. 20, *i*), some of the granules on each side of and in front of the ocular tubercle peculiarly modified, provided with a short stalk, the distal enlarged and flattened portion being rosette-like (fig. 20, *j*); ocular tubercle produced into a single fairly acute spine; stigmatae hidden; segments of pedipalp with very long and strong teeth which are provided at the tip with a very stout seta or spine and a claw-like spur, fig. 20, *h*; femur of leg I with very long spines inferiorly, remaining legs unarmed; calcaneus of all legs much shorter than astragalus; tarsal segments I, 3; II, 8-9; III, 4; IV, 4; median prong of claws of tarsi III and IV much stouter than lateral prongs, fig. 20, *c*.

Two species, Western Cape Province.

#### Key to species.

1. I-II areas with a transverse row of about 10 enlarged granules, size of body 3.7 mm. . . . . *morulifera*, p. 382.
- I-II areas with a transverse row of 2-4 enlarged granules, size of body 2 mm. . . . . *melanophora*, p. 383.

*Mensamontia morulifera* n. sp.

(Text-fig. 20, a-j.)

*Colour*.—Body brown, legs yellow; anterior margin of carapace and area surrounding the ocular tubercle but not the tubercle itself

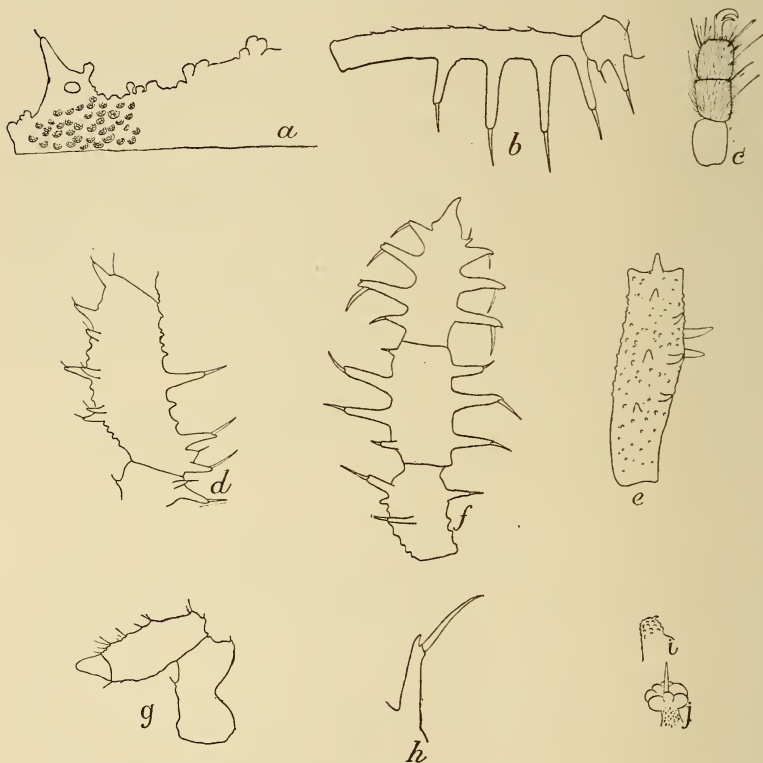


FIG. 20.—*Mensamontia morulifera*. a, ocular tubercle; b, femur of leg I; c, tarsus IV; d, femur of palp from side; e, from above; f, patella-tarsus of palp from below; g, chelicera; h, spine of tibia; i, moruliform; j, rosette-like granules of dorsal scute.

with mushroom-shaped, rosette-like granules as in fig. 20, j (seen from above and enlarged); ocular tubercle seen from the side as in fig. 20, a, a moruliform granule posterior to the main spine; areas of dorsal scute each with a transverse row of enlarged club-shaped moruliform granules (fig. 20, i) (seen from the side and enlarged), interspaces of these areas filled up with regularly spaced small round granules; fifth area with a strip of matt granulation behind the transverse row



of enlarged granules composed of finer and denser granulation than that of the region in front of the transverse row of granules; free tergites with a similar posterior strip of matt granulation, I with a single transverse row of enlarged granules, II with 1 complete and 1 incomplete row, III with more than 1 row; sternites finely shagreened with an anterior row of granules far smaller than those of the tergites; coxae finely shagreened, I with 5-6 teeth along its anterior margin similar to but much shorter than those of femur I, II with a row of small granules in the middle of its inferior surface, a large tooth and 2-3 smaller ones on its posterior distal margin. Pedipalp with long, stout teeth bearing a stout seta at their tips resembling a second segment, and ending above in a claw-like spur (fig. 20, *h*); these teeth especially long on the tibia and tarsus (laterally) and on the femur (inferiorly); femur seen from above (fig. 20, *e*), with scattered round granules giving it a rugose appearance and 2 rows of 4 and 3 teeth; seen from the outer side as in fig. 20, *d*, with a large bifid tooth below near the base and 2 other large teeth; patella, tibia, and tarsus seen from below as in fig. 20, *f*; chelicera as in fig. 20, *g*, seen from the side; femur and trochanter of leg I as in fig. 20, *b*; trochanter with 3 teeth below (only 2 shown in fig.), one of which is large; tarsal segments I, 3; II, 8; III, 4; IV, 4; claw of tarsus of leg IV as in fig. 20, *c*.

*Measurements*.—Pedipalp 4, length of body 3.7 mm.

Type and genotype, 1 specimen, Table Mountain, Cape Town.

Two specimens from Sir Lowry's Pass, Caledon.

*Mensamontia melanophora* n. sp.

(Text-fig. 21, *a-f*.)

*Colour* dark olivaceous brown with black infuscations especially on the posterior tergites, legs coloured similarly to trunk; the mushroom-shaped rosette-like tubercles are fewer in number and smaller than those in *M. morulifera*, there being a few scattered ones on each side of the ocular tubercle, just posterior to it, and along the anterior margin of the carapace, ocular tubercle seen from the side as in fig. 21, *b*; dorsal scute thickly and homogeneously covered with round medium-sized granules, not divided into areas by grooves, these represented in the middle of the areas by transverse rows of enlarged moruliform granules, the number of 2-3 in area I increasing successively to about 8 in area IV; I and II free tergites with a row of similar granules anteriorly, the remainder of the segments with

finer granulation, III tergite with more than 1 irregular row of granules; sternites with fine scale-like granulation and an anterior row of about 12 indistinct round smooth granules; coxae below finely granular, coxa I with its anterior margin provided with 4 seta-tipped teeth. Pedipalp seen from below as in fig. 21, *f*, trochanter with 2 large teeth below (the one bilobate) and 1 small one; femur seen from the outer side rugose (fig. 21, *e*); patella, tibia, and tarsus seen from below as in



FIG. 21.—*Mensamontia menanophora*. *a*, femur of leg I; *b*, ocular tubercle; *c*, chelicera; *d*, patella-tarsus of palp from below; *e*, femur of palp from outer side; *f*, from below.

fig. 21, *d*; chelicera as in fig. 21, *c*; femur of leg I as in fig. 21, *a*; tarsal segments I, 3; II, 8-9; III, 4; IV, 4.

*Measurements*.—Length of body 2-2.2 mm.

Types, 12 specimens from Bredasdorp, Cape Province. All specimens show armature of the first femur below; the species differs from *morulifera* in its distinctly smaller size, darker colour, and the markedly fewer rosette-like granules on the anterior portion of carapace.

#### Gen. ROEWERIA n. gen.

Resembling *Mensamontia* in the number of the tarsal segments which are I, 3; II, 9; III, 4; IV, 4; differing from *Mensamontia* in that the median prong of claws of tarsi III and IV is shorter and weaker than the lateral prongs (fig. 22, *g*); moruliform and rosette-like granules absent, dorsum of body without armature, uniform matt with a few round smooth granules; ocular tubercle smooth with a single long spine distally; stigmæ hidden; coxa I with 2 stout

conical tubercles at its anterior distal apex; pedipalp armed with short blunt teeth or low round granules; II segment of chelicerae with a row of small tooth-like granules on its inner side; femora of all legs unarmed inferiorly, calcaneus of all legs much shorter than astragalus; terminal section of tarsus I 2-jointed, II 3-jointed.

One species, Western Cape Province.

*Roeweria inermis* n. sp.

(Text-fig. 22, a-g.)

Colour yellow; body with matt granulation, the individual granules distinct and bead-like; ocular tubercle as in fig. 22, a;

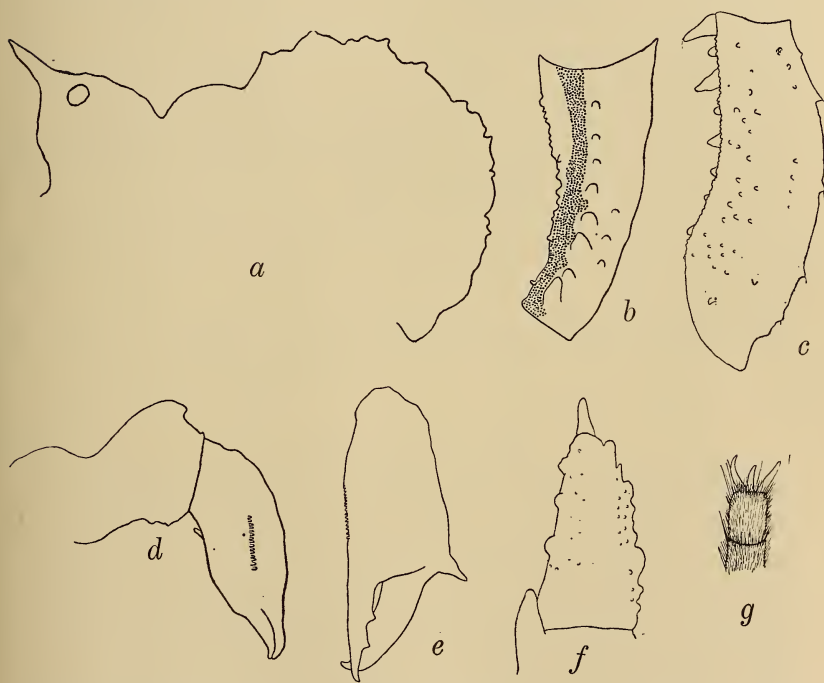


FIG. 22.—*Roeweria inermis*. a, ocular tubercle; b, femur of palp from below; c, from inner side; d, chelicera; e, anterior surface of segment II of chelicera; f, tibia-tarsus of palp below; g, tarsus IV.

dorsal scute divided into areas by distinct grooves only in the middle, areas I and II with a pair of large round smooth granules in the middle, III with 6, IV with 4, the median pair larger than the rest; posterior

margin of dorsal scute with about 6 similar granules in the middle; free tergites with a single row of similar granules, sternites with a row of smooth round granules; coxae shiny, I with 2 large conical tubercles at its distal anterior apex, I and II with a row of smooth granules in the middle of the inferior surface, inferior surfaces of all coxae with a granular patch at their distal apices, posterior distal apex of II and anterior distal apex of IV with a tooth and 4 smaller conical granules. Pedipalp: femur seen from below and from the side as in figs. 22 *b, c*; below an outer row of smooth blunt teeth not as large as in other genera, a median strip of bead-like granules, and some irregularly-placed small round granules on the inner side; femur above with 5 small teeth; patella unarmed, tibia with an irregular row of small round granules on each side, smooth in the middle, unarmed except for a large prominent tooth (fig. 22, *f*) at the inner distal apex; tarsus as in fig. 22, *f*, no long conical teeth but low rounded tubercles on the outer side, stout short teeth on the inner side; claw short and stout; chelicera as in fig. 22, *d*, segment II seen from in front (fig. 22, *e*), with a prominent tooth on the outer side at the base of the movable finger of claw; the inner side with a row of about 14 small tooth-like granules (fig. 22, *d*); legs unarmed, with rows of small granules, tarsal segments 3:9:4:4; claw of tarsus IV as in fig. 22, *g*.

*Measurements*.—Length of body 3·4 mm.

Type and genotype, 1 specimen, Newlands, Cape Town.

Gen. *AMATOLA* n. gen.

Tarsal segments I, 3; II, 5; III, 4; IV, 4; dorsal scute smooth without grooves defining the I–IV areas or carapace, no armature or granules; a distinct lateral and indistinct posterior groove; anterior margin of carapace with a row of peculiar club-shaped granules (fig. 23, *a*); ocular tubercle low with a very short process (fig. 23, *b*); coxa I below with 2 blunt teeth at its anterior distal border; stigmæ hidden; pedipalps moderately armed, chelicerae unarmed; legs comparatively short and stout, calcaneus of all legs much shorter than astragalus; femur of leg I unarmed, similar to remaining femora; lateral prongs of claws of tarsi III and IV shorter and much slenderer than median prong.

One species, Eastern Cape Province.



*Amatola dentifrons* n. sp.

(Text-fig. 23, a-h.)

Colour light brown, appendages yellow; dorsal scute without transverse grooves defining areas I-IV and carapace, a distinct lateral and faint posterior groove present; dorsal scute with homogeneous matt granulation, without enlarged granules or spines, 2 short transverse rows of small obsolete granules posteriorly and

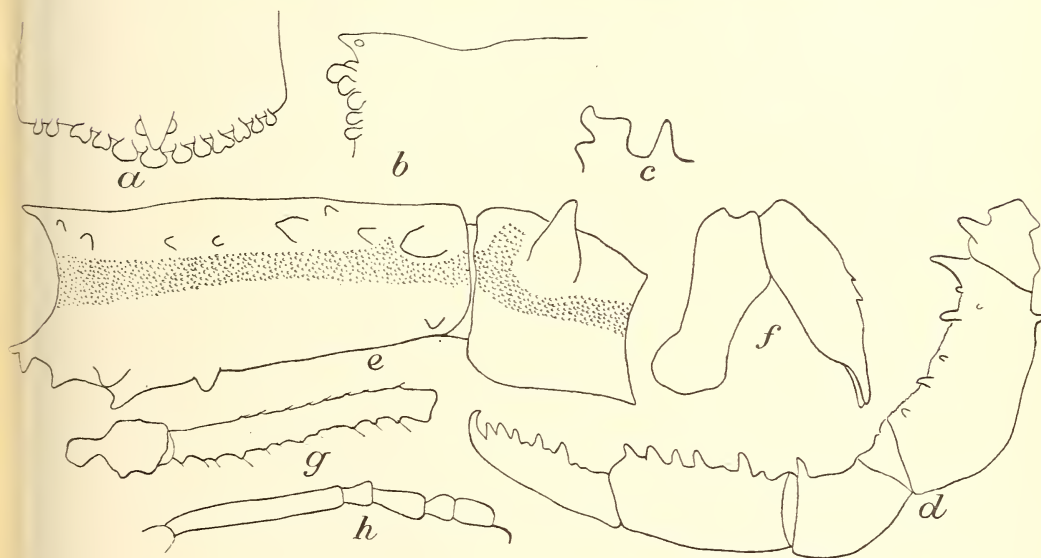


FIG. 23.—*Amatola dentifrons*. *a*, ocular tubercle from above; *b*, from side; *c*, anterior apex of coxa I; *d*, palp from outer side; *e*, femur of palp below; *f*, chelicera; *g*, femur; *h*, tarsus of leg I.

posterior border with a transverse row of small granules; free tergites with a row of granules similar to those of the posterior border of dorsal scute; anterior margin of carapace as in fig. 23, *a*, with a row of 11 semi-divided rounded granules; ocular tubercle seen from the side as in fig. 23, *b*; sternites with rounded granules only at the sides, stigma-bearing sternite anteriorly with 2-3 enlarged tooth-like granules meeting some similar granules on the posterior margin of coxa IV; pedipalp seen from the outer side as in fig. 23, *d*, from below as in fig. 23, *e*; trochanter with a particularly large tooth below, larger than the first basal tooth of the femur, both femur and trochanter with a median strip of fine granulation; patella below with a small

inner tooth in the middle and a larger one at distal outer apex, tibia with 4 inner, 5 outer lateral teeth, tarsus with 5 teeth on each side; chelicera as in fig. 23, *f*, a moderate tooth near the distal outer apex of segment II (not shown in fig.); femur of leg I as in fig. 23, *g*, tarsus of leg I as in fig. 23, *h*; coxae below without granules, smooth, coxa I with a sharp tooth on the anterior margin in the middle and a bifid tooth-like process at distal apex (fig. 23, *c*), coxa II with a row of 4 curved tooth-like granules along distal posterior margin, coxa IV with 3 similar granules along its anterior distal margin as well as those on its posterior margin described above. Tarsal segments I, 3; II, 5-6; III, 4; IV, 4.

*Measurements*.—Length of body 4.5, breadth 3.3, pedipalps 5.8 mm.

Types and genotypes, 2 specimens, Hogsback Mountains, Cape Province.

#### Gen. ROSTROMONTIA n. gen.

Carapace well defined; a groove passing just anterior to the ocular tubercle, the latter situated in the anterior half of carapace; dorsal scute divided into areas by well-defined grooves passing right across the scute and meeting a lateral groove at the sides; dorsal scute unarmed, granules when present on areas arranged in 2 rows, free tergites with 1 row; coxa I usually with 2 blunt tubercles at its anterior distal border; stigmatae hidden; pedipalps, especially tibia and tarsus; not strongly armed; calcaneus of all legs much shorter than astragalus; median prong of claws of tarsi III and IV much stouter than the lateral prongs; tarsal segments I, 3; II, 5; III, 4; IV, 4.

Four species, Western Cape Province.

#### Key to species.

1. 3 terminal segments of tarsus III as broad as or broader than long (fig. 26, *d*) 2.  
    3 terminal segments of tarsus III longer than broad (fig. 27, *d*) *capensis*, p. 394.
2. Areas I-IV with 2 rows of granules, anterior margin of coxa I with 2 stout conical teeth . . . . . 3.  
    Areas I-IV without rows of granules, anterior margin of coxa I without 2 stout conical teeth . . . . . *lisposoma*, p. 392.
3. Femur of pedipalp with 3 sharp teeth above . . . *granulifer*, p. 391.  
    Femur of pedipalp with 2 sharp teeth above . . . *truncata*, p. 389.

*Rostrumontia truncata* n. sp.

(Text-fig. 24, a-h.)

♂. *Colour* light brown, pedipalps, chelicerae, and tarsi of legs yellow brown; anterior margin of carapace with 2 rows of about 3 granules each; ocular tubercle seen from the side as in fig. 24, b, with some small smooth scattered granules on its posterior slope, carapace behind ocular tubercle with 2 short longitudinal rows of about 3 granules each, divided by a short cleft; areas of dorsal scute each with an anterior row of enlarged granules and a posterior row of small ones (fig. 24, a), the middle pair of the row of enlarged granules a little larger than the rest; posterior border of dorsal scute and free tergites with one row of enlarged granules provided at their tips with setae; stigma-bearing sternite with an irregular double row of round granules at the sides, remaining sternites matt with an anterior row of small smooth granules; inferior surfaces of coxae smooth, II-IV in the middle with a row of small shiny granules, anterior margin of coxa I with 2 stout conical tubercles, the distal one bifid, coxa II with a large club-shaped granule at its posterior distal apex. Pedipalp: trochanter with 1 tooth below on the outer side; femur above with 2 pointed teeth and 2 round shiny granules near the base, femur below as in fig. 24, c, an irregular double row of teeth on the outer side, some small bead-like granules on the inner side, between these a strip of bead-like granulation; patella with a small tooth near distal outer apex and in addition a row of 3-4 small granules on each side, between them a short strip of bead-like granulation similar to that of the femur; tibia on inner side with an irregular row of about 15 shiny round granules and 2 tooth-like granules near apex, on outer side an irregular double row of small round granules, between them a narrow strip of bead-like granulation which tends to form short transverse ridges distally; inner side of tarsus with 3 distinct teeth, outer side with a ridge of blunt confluent granules (fig. 24, d); chelicera as in fig. 24, h, a blunt bifid round granule at the superior apex of segment I, segment II with 3 tooth-like granules in the distal half of the anterior surface, a row of 3 tooth-like granules on the outer surface near its distal apex. Legs: femur I as in fig. 24, e, tarsus I as in fig. 24, f, tarsus II as in fig. 24, g, tarsal segments of III and IV short and stout, usually broader than their own tibiae and certainly broader than the tarsal segments of leg II; tarsal segments I, 3; II, 5; III, 4; IV, 4.

*Measurements*.—Length of body 4, pedipalps 5.5 mm.

♀. As in ♂ with the following differences: a lateral row of about

6 granules at the base of the ocular tubercle; pedipalp smaller in proportion to body than in ♂, patella with 3 blackish granules on

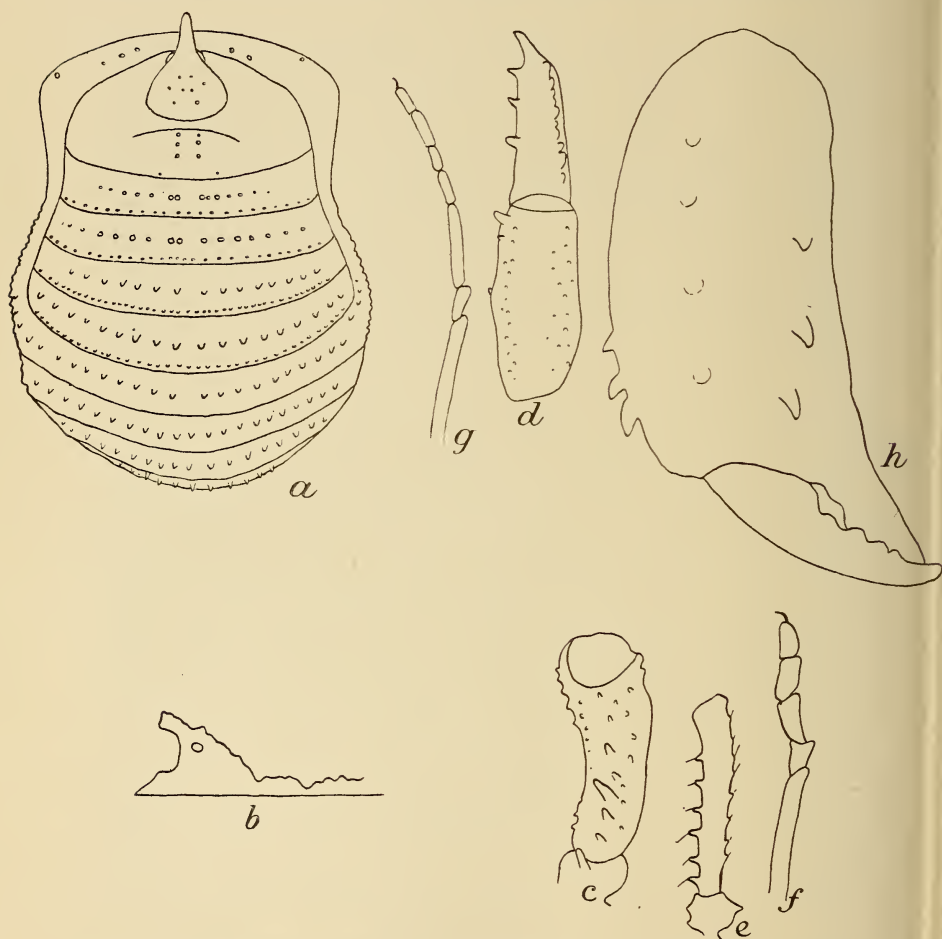


FIG. 24.—*Rostromontia truncata*. a, dorsal surface; b, ocular tubercle; c, femur of palp below; d, tibia-tarsus of palp below; e, femur of leg I; f, tarsus I; g, tarsus II; h, anterior surface of segment II enlarged.

inner side, 1 on outer side, between these some smaller granules and a granular bead-like strip; tibia with 4 tooth-like granules on inner, 6 on outer side, these granules seta-tipped and pointed, distinctly larger than the other rounded granules at the sides of the segment, inferior surface with coarse ridges; tarsus as in ♂; segment II of chelicera with a row of 3 tooth-like granules on anterior surface near



apex but these smaller than in ♂, outer surface without 3 tooth-like granules near distal apex, segment I with 2 small round granules at superior distal apex.

*Measurements*.—Length of body 3·9, pedipalps 4·5 mm.

Types, 4 ♂♂, 2 ♀♀, Witte River, Wellington, Cape Province.

*Rostromontia granulifer*, n. sp.

(Text-fig. 25, a-c.)

♂. Colour in general blackish-brown, tarsal segments of legs olive green, the joints yellowish; chelicerae, pedipalps, and carapace with

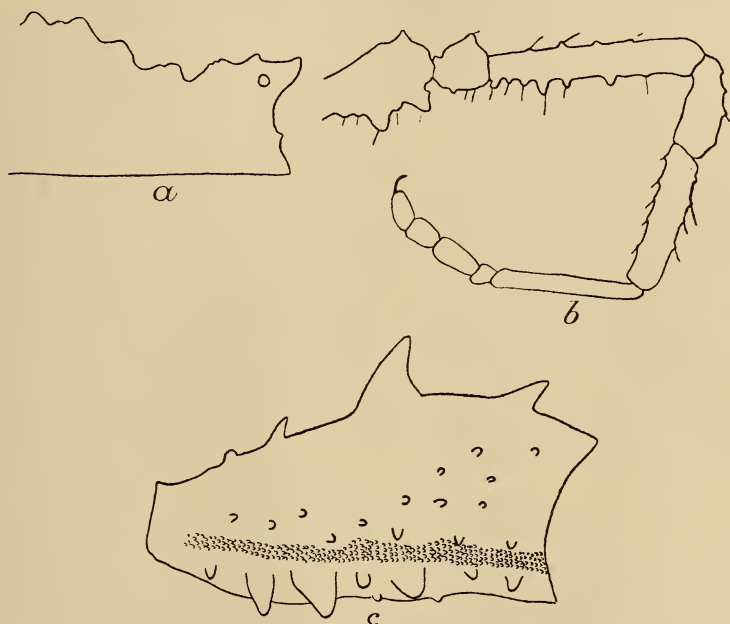


FIG. 25.—*Rostromontia granulifer*. a, ocular tubercle; b, leg I; c, femur of palp below.

distinct black reticulate markings; closely resembling *R. truncata*, the granules of dorsal scute and free tergites larger, ocular tubercle somewhat differently shaped (fig. 25, a), with a row of small granules only in the middle of the posterior surface of tubercle; carapace behind ocular tubercle with 2 oblique or transverse rows of 5-6 granules each, the cleft between them broadly  $\Lambda$ -shaped; granules of areas and free tergites as in *R. truncata* but stouter, sternites as in *truncata*; coxae II-IV with more definite and larger granules than in

*truncata*, coxa IV with 5 granules along its posterior margin growing successively larger distally and projecting over the cleft between coxa IV and stigma-bearing sternite. Pedipalp: femur much deeper than wide and strongly flattened from side to side with 3 distinct sharp teeth above and 1 small round granule near the base, below as in fig. 25, *c*; patella, tibia, and tarsus resembling *truncata*; chelicera as in *truncata*, segment I ending distally above in a blunt tooth, segment II with tooth-like granules similar to those of *truncata* but stronger. Leg I as in fig. 25, *b*, tarsal segments of III and IV short and stout; tarsal segments I, 3; II, 5; III, 4; IV, 4.

*Measurements*.—Length of body 3·8, pedipalps 5·7 mm.

♀. As in ♂ but differing in the following particulars: ocular tubercle with a lateral row of 7–8 granules at its base; pedipalp: patella with a tooth-like granule at its inner, not its outer, distal apex; tibia with 4 seta-tipped teeth and some smaller granules on the outer side, 3–4 teeth on the inner side, inferior surface of tibia with coarse transverse ridges; tarsus as in ♂; chelicera as in ♂, the II segment, however, without 3 tooth-like granules on its outer surface near the apex; femur of leg I not armed inferiorly or with 1–2 low seta-tipped tubercles. The ♀ can be distinguished from the ♂ most readily by the armature of the tibia of the pedipalp which is distinctly stronger than in the ♂; the pedipalps in proportion to the body are noticeably smaller than in the ♂.

*Measurements*.—Length of body 3·7, pedipalps 4·3 mm.

Types, 1 ♂, 1 ♀, Kalk Bay, Cape Town. Other specimens: 2 ♂♂, 1 ♀, Blinkwater Ravine, Table Mountain; 1 ♂, Newlands, Cape Town.

*Rostrumontia lisposoma* n. sp.

(Text-fig. 26, *a-f*.)

♂. *Colour* yellow. Carapace defined posteriorly by an incomplete procurved groove; ocular tubercle large, blunt (fig. 26, *a*); whole of dorsal surface of body with fine matt granulation, no spines but a few minute granules; areas of dorsal scute defined by grooves passing across the scute to meet a lateral groove; posterior margin of dorsal scute and free tergites with a transverse row of minute, barely discernible seta-tipped granules; sternites matt, posterior ones with 1–2 rows of setae; coxae matt, I and II with inferior surfaces covered with irregularly placed round granules, especially distally, anterior margin of I without 2 large conical tubercles, II with an enlarged tooth-like granule at its posterior distal apex, III with a row of small round granules along its posterior and anterior margins, IV with a similar

row along its posterior margin, inferior surface of IV without granules. Pedipalp seen from inner side (fig. 26, *c*) ; trochanter with 1 large outer and 1 small inner tooth ; femur strongly granular on the inner surface,

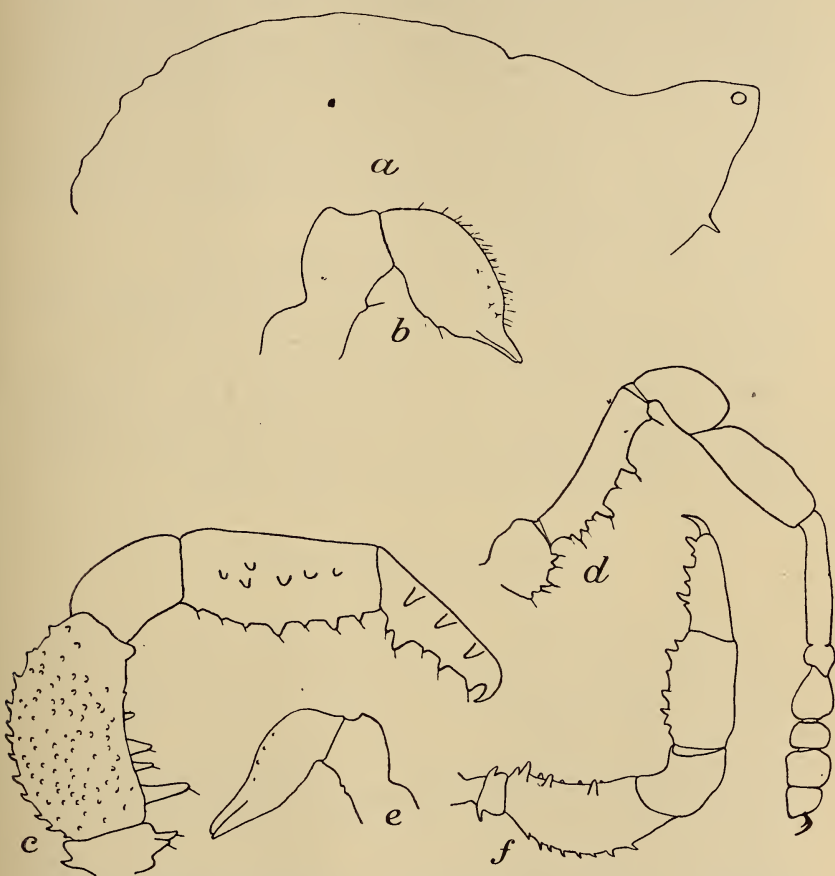


FIG. 26.—*Rostromontia lisposoma*. *a*, ocular tubercle; *b*, chelicera; *c*, palp from inner side; *d*, leg III, all of ♂; *e*, chelicera; *f*, palp from outer side of ♀.

smooth on the outer surface, below with 4 strong teeth on the outer side, the first longer and stronger than the rest, on the inner side 1 small tooth opposite the large outer basal tooth and a large tooth near the middle, median strip of bead-like granulation absent ; patella unarmed, tibia and tarsus as in fig. 26, *c* ; chelicera as in fig. 26, *b*, a few indistinct granules on its anterior surface ; femora of all legs armed inferiorly with a row of granules, those of III (fig. 26, *d*) conical and

distinctly longer than in the other legs, tarsal segments of III very short and stout; tarsal segments I, 3; II, 5; III, 4; IV, 4.

*Measurements*.—Length of body 4.5, pedipalps 5.2 mm.

♀. As in ♂ with the following differences: teeth on inferior surface of femur of pedipalp much smaller, about half the size of those of the ♂; inner surface of femur matt, a patch of granules at distal apex but not elsewhere, outer surface smooth; femur of leg III similar to that of ♂ with 3–4 conical granules inferiorly larger than those of remaining legs; pedipalps much smaller in proportion to body than in ♂. Figs. 26, *f, e*, represent respectively the pedipalp and chelicera of a ♀ from Swellendam.

*Measurements*.—Length of body 4.3, pedipalps 4 mm.

Types, 1 ♂, 2 ♀♀, Newlands, Cape Town. Other specimens: 3 ♀♀, Constantia, Cape Town; 3 ♀♀, River Zonder End, Swellendam; 1 ♀, Hottentots Holland Mountains; 1 ♀, Swellendam.

This species resembles the North American form *Sclerobunus robustus* Packard in the absence of body armature and the spination of the pedipalp, especially the dorsal surface of the femur, see figs. 746, *a, b*, p. 596, *Die Weberknechte der Erde*, Roewer.

*Rostromontia capensis* n. sp.

(Text-fig. 27, *a–h*.)

♂. *Colour* yellow brown; ocular tubercle and outline of carapace as in fig. 27, *c*, a row of small granules laterally to and in front of ocular tubercle, ocular tubercle with a number of small granules on its posterior surface and sides; the first 4 areas each with a transverse row of granules in the middle and a row of minute granules along its posterior border, area V and free tergites with only the one row of larger granules in the middle; whole of dorsal surface of body with a background of fine matt granulation; sternites matt with a single transverse row of small granules in the middle, coxae shiny with some rather indistinct transverse rows of granules in the middle, I with 2 large conical teeth at anterior distal apex. Pedipalp seen from inner side (fig. 27, *a*); trochanter with a small tooth above and below; femur with 3 large teeth above and 2 (sometimes 3) much smaller conical ones near the basal one but situated more mesially, below with 4 large teeth on the outer side, some small round shiny granules on the inner side, between these a median row of fine bead-like granules; patella unarmed except for a blunt tooth at its distal outer apex; tibia not armed with teeth but an irregular row



of about 11 small low granules extending almost the whole length of inner side, outer side with about 4-6 similar granules; tarsus as in fig. 27, *b*; chelicera as in fig. 27, *e*, anterior surface with a sharp tooth near its distal apex, inner surface with 3 teeth, the most distal one round and granuliform. Legs long and slender, femur I with a row of granules inferiorly not much stronger than those of remaining



FIG. 27.—*Rostromontia capensis*. ♂: *a*, femur of palp from inner side; *b*, tarsus of palp; *c*, ocular tubercle; *d*, tarsus III; *e*, chelicera. ♀: *f*, ocular tubercle; *g*, femur of palp from inner side; *h*, tibia of palp.

femora; 3 terminal segments of tarsus III (fig. 27, *d*), longer than broad (in the other species of the genus these segments are broader than long); tarsal segments 3:5:4:4.

*Measurements*.—Length of body 3.2, chelicerae 4.6 mm.

♀. As in ♂ with the following differences: terminal spine of ocular tubercle distinctly shorter (fig. 27, *f*); pedipalp seen from inner side (fig. 27, *g*); the 2 small basal teeth on the inner side of the femur are always absent, the outer row of teeth on inferior surface are much smaller than in ♂; tibia inferiorly with the outer row of granules much larger than in the ♂, tipped with long setae, inner row small

and seta-tipped, tarsus below with more numerous setae than in ♂; chelicera as in ♂ but the granules much smaller.

*Measurements*.—Length of body 3.1, chelicerae 3.3 mm.

The presence of the 2 small basal teeth on the inner side of the femur is a good means of distinguishing the males; the spine of the ocular tubercle is nearly always longer in the ♂ than in the ♀, though there are a few specimens in which this is not so; as usual, the pedipalps are much larger and stouter in proportion to the body in the ♂ than in the ♀. This is by far the most common Opilionid in the Cape Peninsula, there being about 80 specimens in the Museum's collection from localities in the Peninsula, mostly different parts of Table Mountain.

Types, 6 ♂♂, 7 ♀♀, Newlands, Cape Peninsula.

Gen. CRYPTOBUNUS n. gen.

Differing from the other South African genera of *Triaenonychinae* chiefly in that the calcaneus of the I and II legs is longer than the astragalus instead of being much shorter; dorsal scute without armature and without transverse grooves; anterior margin of carapace with 5 conical granules; coxa I below with 1 blunt tubercle at its anterior distal border; stigmatae hidden; pedipalp femur with a median strip of short cylindrical setae below; femur of leg I not armed inferiorly; median prong of claws of tarsi III and IV much stouter than the lateral claws; tarsal segments 3 : 5 : 4 : 4.

One species, Natal.

*Cryptobunus setifemur* n. sp.

(Text-fig. 28, a-g.)

*Colour* light brown; anterior margin of carapace with 5 conical seta-tipped granules, the middle one situated just anteriorly to the ocular tubercle; ocular tubercle as in fig. 28, a, seen from the side, with a short terminal process; whole of dorsal scute covered with fine dust-like granulation without spines or granules except 4 median pairs of obsolete granules in the posterior half; dorsal scute without any indication of transverse grooves but with well-defined lateral and posterior grooves; posterior margin of dorsal scute with a median pair, free tergites with a transverse row of obsolete granules; sternites matt; coxae with their inferior surfaces without granules but not shiny, coxa I with a large tubercle at its anterior distal apex, II with 5-6 rounded granules along its posterior distal margin, IV with 3-4 similar granules along its anterior distal margin and 2-3 longer club-

shaped granules at its posterior distal margin projecting backwards to meet 2-3 similar granules at the sides of the stigma-bearing sternite;

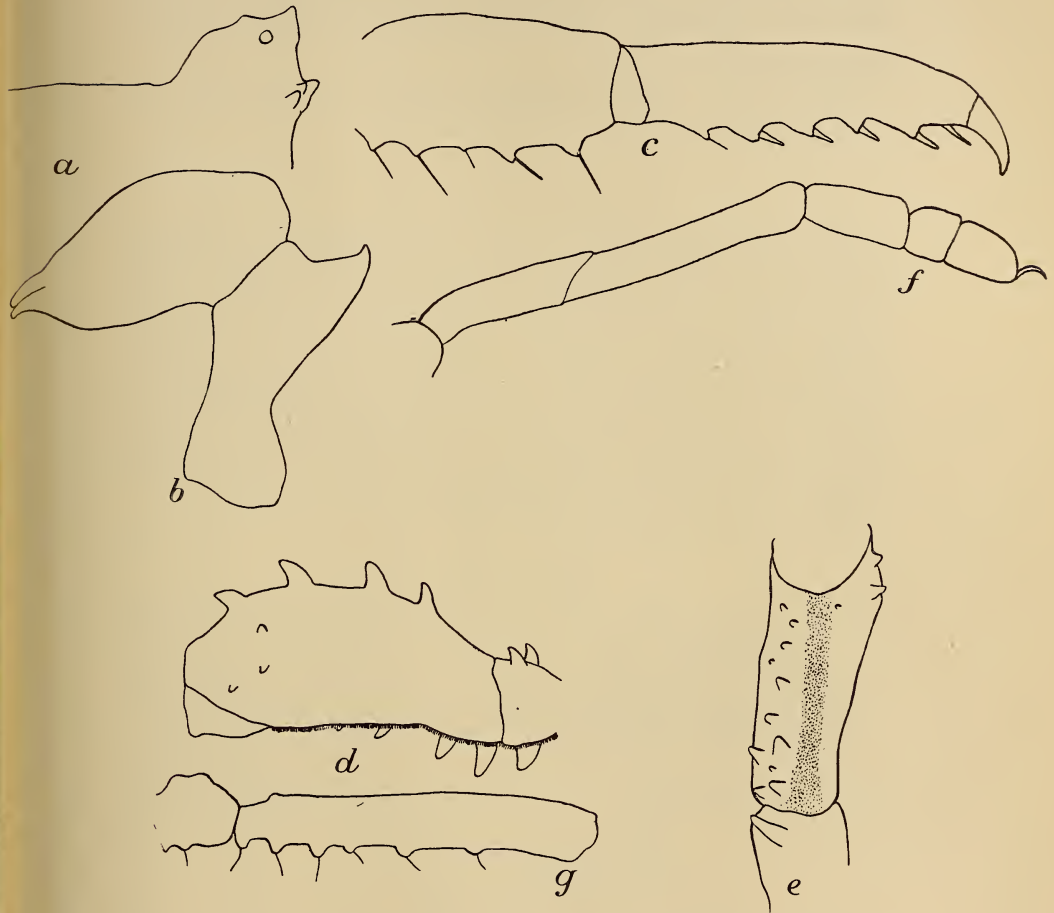


FIG. 28.—*Cryptobunus setifemur*. a, ocular tubercle; b, chelicera; c, tibia-tarsus of palp; d, femur of palp from inner side; e, from below; f, metatarsus-tarsus of leg I; g, femur I.

pedipalp as in fig. 28, d, seen from the inner side; trochanter with 2 small teeth above, 1 large one below; femur with 4 teeth above, some small and large teeth on outer side below, none on inner side except at apex, a median strip of fine short cylindrical setae differing markedly from the usual fine bead-like granulation of other genera; femur below as in fig. 28, e; patella unarmed, tibia as in fig. 28, c, showing the

armature of the inner side, the outer side similar, tarsus as in fig. 28, *c*; chelicera as in fig. 28, *b*; legs: femur I as in fig. 28, *g*, remaining femora unarmed, metatarsus and tarsus of leg I as in fig. 28, *f*, the calcaneus longer than the astragalus, their articulating point not clearly defined; tarsal segments 3 : 5 : 4 : 4.

*Measurements*.—Length of body 3·6, breadth 2·3, pedipalps 3·3 mm.

Type, 1 specimen, Pietermaritzburg, Natal.

Gen. AUSTROMONTIA n. gen.

Resembling *Rostromontia* in most of its characters but differing therefrom in the second tarsus, having 4 instead of 5 segments; dorsal scute divided by transverse grooves into areas; coxa I below with 2 blunt tubercles at its anterior distal border; stigmæ hidden; chelicerae with the upper surface of segment I ending in a pointed tooth or process; tarsus of leg I consisting of 3, remaining tarsi of 4 segments; calcaneus of metatarsi I and II shorter but not much shorter than astragalus; femur I not armed below; median prong of claws of tarsi III and IV stouter than the lateral prongs.

Three species, Western Cape Province.

*Key to species.*

1. Femur of pedipalp below with a large compound tooth on the outer side near the base, figs. 30, *a*; 31, *d* . . . . . 2.  
     Femur below without a large compound tooth, the large teeth on the outer side simple and homogeneous, fig. 29, *e* . . . . . *silvatica*, p. 398.
2. Femur of pedipalp below with a bifid tooth on the outer side near the base  
     *capensis*, p. 400.  
     Femur of pedipalp below with a trifid tooth on the outer side near the base  
     *caledonica*, p. 402.

*Austromontia silvatica* n. sp.

(Text-fig. 29, *a-g*.)

♀. *Colour*.—Body brown, the segments bordered posteriorly with black, appendages brown variegated with black. Body closely and finely beset with small round granules; anterior margin of carapace with 1 seta-tipped granule on each side of the ocular tubercle; ocular tubercle as in fig. 29, *b*, with some round shiny granules on its lateral and posterior slopes more numerous on the posterior slope; area behind ocular tubercle with 3 short medially interrupted rows of round seta-tipped granules, the anterior row consisting of 1, the middle of 3, the posterior of 6 on each side; the 4 areas each with a



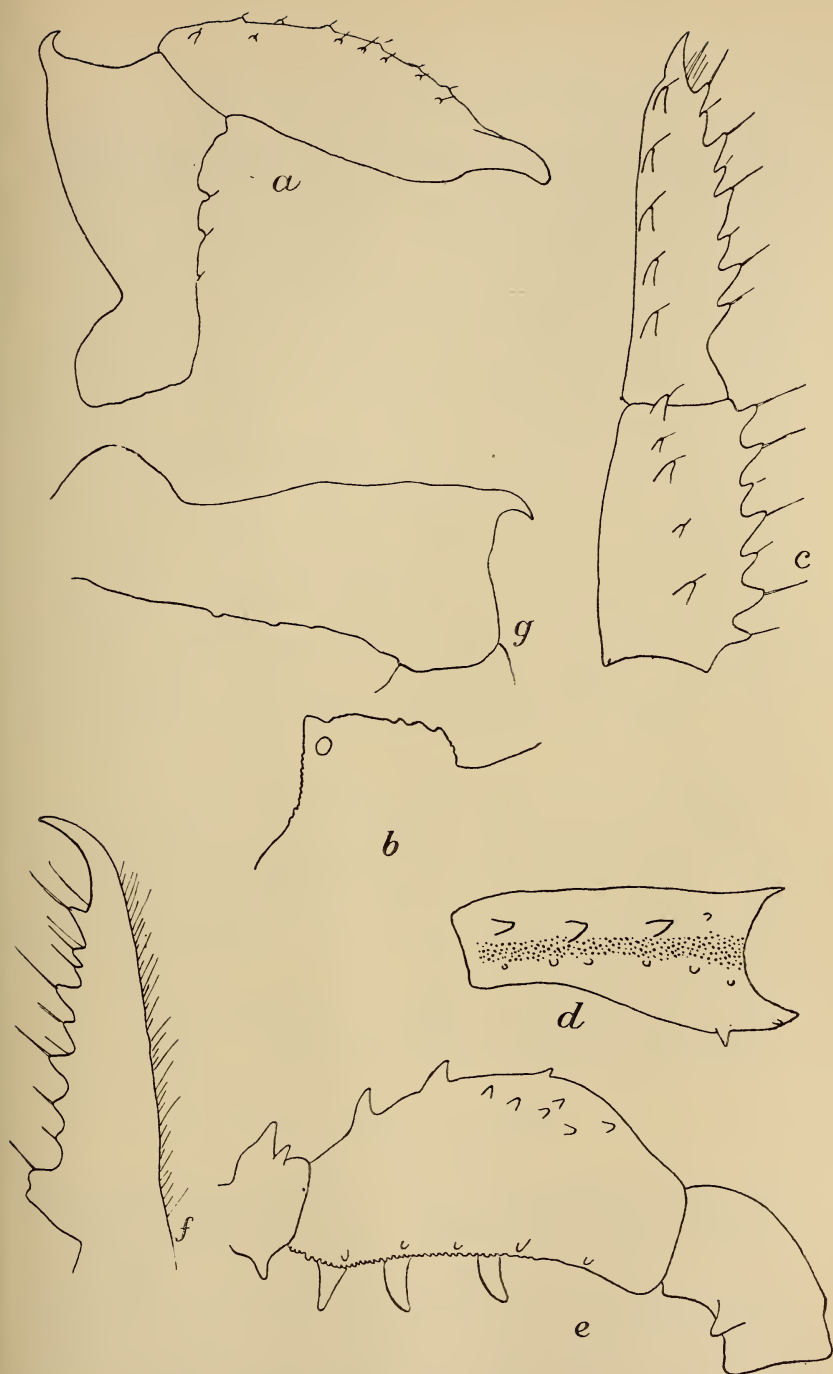


FIG. 29.—*Austromontia silvatica*. ♀: *a*, chelicera; *b*, ocular tubercle; *c*, tibio-tarsus of palp below; *d*, femur of palp below; *e*, from inner side. ♂: *f*, outer side of tarsus of palp; *g*, segment I of chelicera.

posterior bordering row of small granules and a shorter anterior row not reaching the sides and interrupted in the middle; fifth area and free tergite I provided with only 1 middle row, free tergite II with 2 rows; sternites finely shagreened with an anterior row of small round granules; coxae shiny below, without granules, II and IV with a distal patch of fine granulation, that of IV larger than II; coxa I with 2 stout conical tubercles situated along its anterior distal margin. Pedipalp seen from the inner side (fig. 29, *e*), from below (fig. 29, *d*); trochanter with 1 tooth below, 2 above, femur below with 3 large teeth in its proximal two-thirds on the outer side, a row of 5-6 denticles on the inner side, a strip of fine granulation between these rows; femur above with 3 teeth, the distal one smaller than the others and a group of 5 small teeth near the distal inner apex; inner side of femur covered with fine matt granulation, outer side smooth; patella with 1 tooth on the inner side, tibia and tarsus as in fig. 29, *c*; chelicerae as in fig. 29, *a*, segment I with a hooked tooth at its superior distal apex, a saddle-shaped dorsal depression situated well behind the middle of the segment; neither femur of leg I nor those of the other legs armed below; calcaneus of metatarsus I,  $\frac{1}{3}$ - $\frac{1}{2}$  the length of astragalus, calcaneus of metatarsus II,  $\frac{1}{5}$ - $\frac{1}{4}$  the length of astragalus; tarsal segments 3:4:4:4.

*Measurements*.—Total length 3.2, pedipalps 3.7 mm.

♂. As in ♀ with the following differences: the terminal process of ocular tubercle slightly longer than in ♀; pedipalps much larger and longer in proportion to the body than in ♀, see measurements below; tibia with smaller teeth, at the sides below, outer side of tarsus as in fig. 29, *f*, inner side with 5 teeth; segment I of chelicerae proportionally longer than in ♀ (fig. 29, *g*).

*Measurements*.—Length of body 2.7, pedipalps 5.3 mm.

Types, 4 ♂♂, 2 ♀♀, Knysna, Cape Province.

*Austromontia capensis* n. sp.

(Text-fig. 30, *a-f*.)

*Colour* yellow brown; anterior margin of carapace with 3 small seta-tipped granules on each side; ocular tubercle as in fig. 30, *e*, seen from the side; area behind ocular tubercle with 2 short longitudinal parallel rows of 3-4 small granules; areas I-IV each bordered posteriorly with a row of small granules, a row of larger seta-tipped granules in the middle (these much fewer in number and not reaching the lateral grooves); area V and free tergites I and II with a single

row of larger granules, III free tergite with 2 rows of granules ; stigma-bearing sternite with a row of setae at each side, remaining sternites

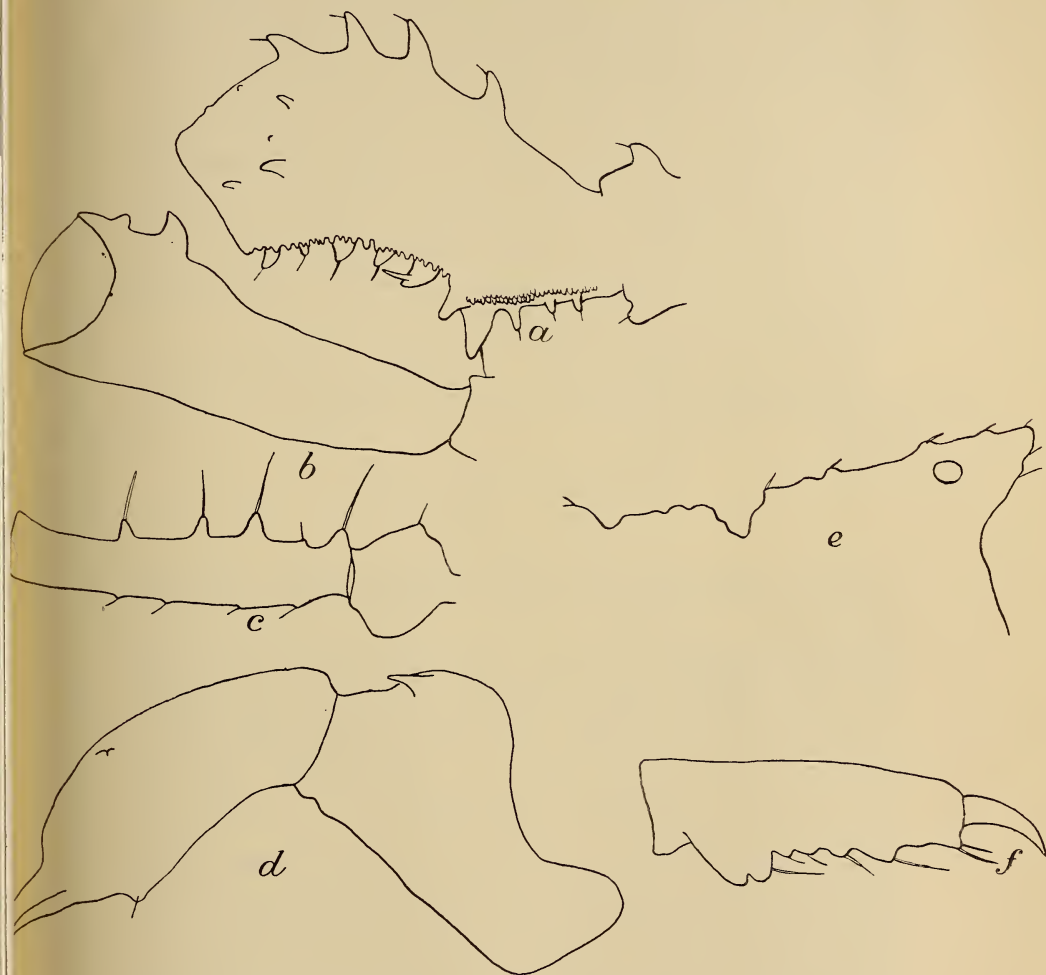


FIG. 30.—*Austromontia capensis*. *a*, femur of palp from inner side ; *b*, from below ; *c*, femur I ; *d*, chelicera ; *e*, ocular tubercle ; *f*, tarsus of palp from outer side.

with an anterior row of obsolete granules ; coxae below smooth and shiny without armature except I, which has two conical tubercles on its anterior distal margin ; genital operculum smooth, broader than long. Pedipalp : femur differing from *A. silvatica* in having a large

bifid tooth near the base on the outer side below, distally to this 5 smaller teeth (fig. 30, *a*), no denticles or enlarged granules on the inner side but the usual strip of bead-like granulation in the middle; inner side of femur with matt granulation and a group of 3 teeth near distal apex, one of these large (fig. 30, *b*, showing outline of femur from below); outer side of femur smooth and shiny; femur above with 4 teeth; patella unarmed, tibia below with some small irregularly placed granules at the sides, 2 teeth near its inner distal apex, tarsus on the outer side as in fig. 30, *f*, on the inner side with 3 teeth; chelicera as in fig. 30, *d*, segment I with a tooth-like process at its superior apex on the inner side, this process directed slightly inwards; femur I armed below as in fig. 30, *c*; calcaneus much shorter than astragalus in metatarsi I and II; tarsal segments 3:4:4:4.

*Measurements*.—Length of body 3, pedipalps 3.8 mm.

Type, 1 ♀ (?), Platteklip Ravine, Table Mountain. Other specimens: 1 ♀, St James; 2 ♀♀, Newlands, Cape Town.

*Austromontia caledonica* n. sp.

(Text-fig. 31, *a-d*.)

*Colour*.—Body olive brown with blackish reticulate infuscation, pedipalps and appendages yellowish brown; anterior margin of carapace with 2 seta-tipped granules on each side; ocular tubercle seen from the side as in fig. 31, *b*, a seta-tipped granule on each side at its base anteriorly, posterior slope in the middle with a row of about 5 seta-tipped round granules; area behind ocular tubercle with 2 short anteriorly converging rows of 3-4 small granules; areas I-IV with a posterior marginal row of small granules, a row of larger seta-tipped conical granules in the middle, the 2 central ones in each row slightly enlarged, these rows consisting of more numerous granules than in *capensis* and reaching or nearly reaching the lateral grooves; fifth area and I and II free tergites with 1, III free tergite with 2 rows of conical granules; stigma-bearing sternite with 1 anterior row of small granules, remaining sternites with 2 rows of similar granules; coxae below smooth and shiny, coxa I with 2 conical tubercles at its anterior distal margin, the distal one bifid; genital operculum smooth, longer than broad. Pedipalp: femur (fig. 31, *d*, seen from inner side) as in *capensis* except that the large basal tooth on the outer side below is trifid, a group of 2 teeth near the apex on inner side, one of these large, above 3 instead of 4 teeth; patella unarmed, tibia with some irregularly-placed granules at the sides, 2 short stout teeth near



the apex and 1 near the base on the inner side ; tarsus as in *capensis* ;  
chelicera as in fig. 31, a, segment I with 2 moderate teeth above, near



FIG. 31.—*Austromontia caledonica*. a, chelicera; b, ocular tubercle; c, femur I; d, femur of palp from inner side.

distal apex ; femur I armed as in fig. 31, c ; calcaneus of metatarsi I and II much shorter than astragalus ; tarsal segments, 3 : 4 : 4 : 4.

*Measurements*.—Length of body 2·3, pedipalps 3·9 mm.

Type, 1 ♂ (?), Caledon, Cape Province.

#### Gen. BIACUMONTIA n. gen.

Ocular tubercle with 1 or 2 terminal processes ; dorsal scute divided into areas by well-defined grooves, a lateral groove present ; armature of body consisting of a background of small round granules, the areas of dorsal scute and free tergites with 1 or 2 rows of larger conical seta-tipped granules ; stigmatae hidden ; coxa I with 2 large tubercles along its anterior margin ; pedipalp with tibia long and weakly armed ; segment II of chelicerae with a row of about 17 minute comb-like teeth on the inner side ; tarsal segments, especially of II, long and slender, calcaneus of metatarsus I and II long ; median prong of claw of tarsi III and IV stouter than the lateral claws, tarsus I with 2, II with 4, III and IV each with 3 segments.

Four species, Cape Province.

*Key to species.*

1. Ocular tubercle with a posterior spine-like process (fig. 33, *a*), calcaneus of metatarsus II only a little shorter than astragalus . . . . . *cornuta*, p. 406.  
     Ocular tubercle without a posterior spine-like process (fig. 32, *c*), calcaneus of metatarsus II about  $\frac{1}{2}$  length of astragalus . . . . . 2.
2. Areas of dorsal scute with a double row of enlarged granules, teeth on inferior outer surface of pedipalp femur round and truncate (fig. 34, *f*)  
     . . . . . *truncatidens*, p. 408.  
     Areas of dorsal scute with a single row of enlarged granules, teeth on inferior outer surface of pedipalp femur more or less pointed (fig. 35, *c*) . . . . . 3.
3. Areas of dorsal scute with the middle pair of granules enlarged (fig. 32, *b*), inferior outer surface of pedipalp femur with only 4 large teeth (fig. 32, *g*)  
     . . . . . *paucidens*, p. 404.  
     Areas of dorsal scute with the middle pair of granules not enlarged, inferior outer surface of pedipalp femur with at least 7 large teeth (fig. 35, *c*)  
     . . . . . *fissidens*, p. 410.

*Biacumontia paucidens* n. sp.(Text-fig. 32, *a-g*.)

♂. *Colour*.—Legs and trunk yellow brown with blackish infuscations, dorsal scute with a distinct blackish vertebral stripe (sometimes doubled) above, the sides blackish; free tergites I and II black in anterior half, yellow in posterior half, III free tergite black; pedipalps yellow.

Dorsal scute covered with small granules, anterior lateral angles of carapace, posterior surface of ocular tubercle, and segment posterior to ocular tubercle comparatively smooth; ocular tubercle with a rather slender spine, a swollen enlargement posteriorly (fig. 32, *c*); areas of dorsal scute bordered posteriorly by a distinct row of small granules similar to those at the sides of the ocular tubercle, area I with an anterior row in addition, area IV bordered posteriorly with a strip of granules more than 1 deep; areas with a single row of enlarged conical seta-tipped granules, area I with about 4, II with 7, III with 8, IV with the row extending almost the whole width of the scute; the middle pair of these rows larger than the remaining granules in areas I–III, those of IV either not larger or smaller than the remaining granules, area V with a single row of enlarged granules, its posterior half matt; anterior half of free tergites I and II with 2 rows of granules, the anterior one abbreviated, posterior half matt, III free tergite with 2 well-separated rows of enlarged granules; sternites with a row of small round fairly close-set granules in anterior half; coxae as in other species of *Biacumontia*.

Pedipalp : femur as in fig. 32, *g*, seen from outer side, fig. 32, *f*, seen from inner side, a row of 4 large and 3 much smaller pointed teeth on

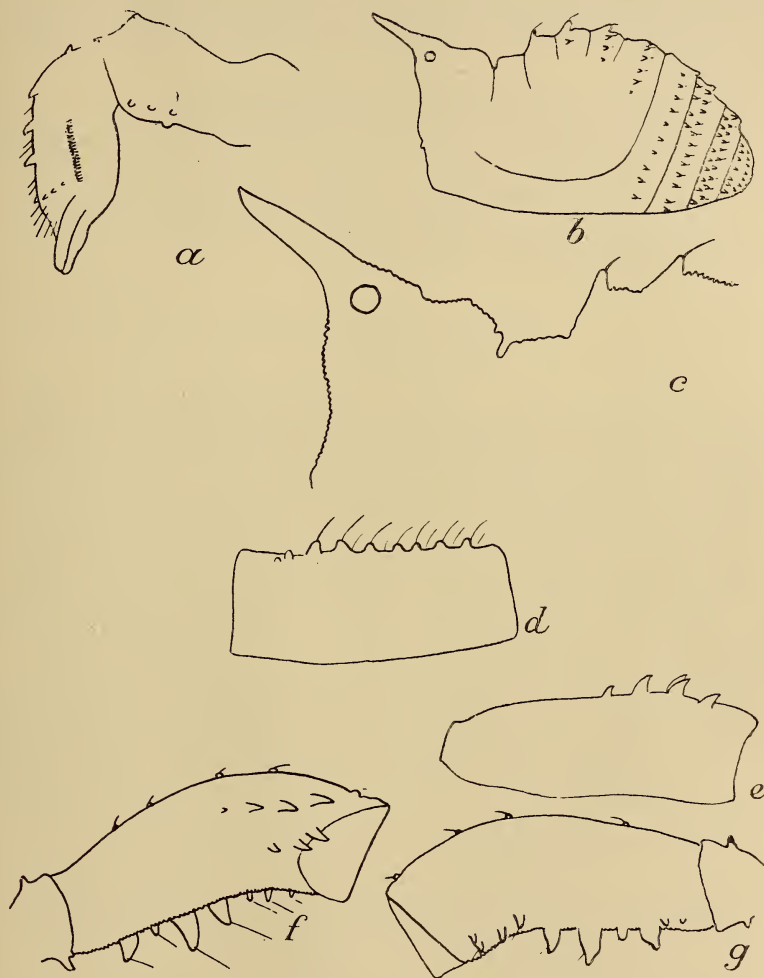


FIG. 32.—*Biacumontia paucidens*. *a*, chelicera; *b*, body from side; *c*, ocular tubercle; *d*, tibia of palp from outer side; *e*, femur of palp from above; *f*, from inner; *g*, from outer side.

outer side below; inner side with 4 sharp subapical teeth near the upper surface, these teeth seen from above as in fig. 32, *e*; upper surface of femur without sharp teeth but with 5 low granules; outer side of tibia as in fig. 32, *d*, inner side unarmed, tarsus with about

4 teeth on each side; chelicera as in fig. 32, *a*, segment I without 2 small sharp teeth near upper apex but instead a small round granule. Legs: calcaneus of metatarsus I about  $\frac{1}{2}$  length of astragalus, calcaneus of metatarsus II about  $\frac{1}{3}$  length of astragalus; tarsal segments 2:4:3:3.

*Measurements*.—Total length 2.8, pedipalps 3.5 mm.

♀. Pedipalps smaller in proportion to the body than in ♂; genital operculum wider than long (in ♂ longer than wide); otherwise as in ♂.

*Measurements*.—Total length 2.4, pedipalps 2 mm.

Types, 3 ♂♂, 5 ♀♀, Stones Hill, Grahamstown, Eastern Cape Province. Types in Albany Museum, Grahamstown.

*Biacumontia cornuta* n. sp.

(Text-fig. 33, *a-e*.)

♂. *Colour*.—Body and appendages yellow with blackish infuscation, dorsal scute with a longitudinal black stripe down the middle; dorsum of body covered with small tooth-like granules; ocular tubercle with an anterior and posterior spine, the anterior one the longer of the two, the eyes placed at its base; the four areas of dorsal scute each with a median pair of enlarged granules tipped with setae; posterior border of dorsal scute and free tergites I and II with a transverse row of smaller granules in the middle, each tipped with a seta, third free tergite with 2 such rows of granules; sternites finely shagreened with an anterior row of small oval granules tipped with setae; coxae below smooth and shiny except distal fourth of II, a small distal patch of III, and the distal half of IV, which are rugose with small round closely packed granules; coxa I with 2 bifid tubercles on its anterior distal margin, the distal one pointed, the proximal one rounded at its apex; coxa II with 4 club-shaped granules along its posterior distal margin, IV with about 4 similar granules along its anterior distal margin, 6 smaller ones along its posterior distal margin; stigma-bearing sternite with 6 round granules at its lateral anterior border which are larger than the remaining granules of the sternites. Pedipalp: femur seen from the outer side as in fig. 33, *b*, with 8 small denticles above, below armed on the outer side with a row of strong teeth, the usual fine bead-like granulation in the middle; tibia and tarsus not strongly armed below, seen from the side (fig. 33, *d*), with a row of teeth forming a saw-like edge; chelicera seen from the inner side as in fig. 33, *c*; segment II on the inner surface with a straight row of about 15 small fine teeth forming a comb-like structure, on the outer side near the base of the



claw with 4-5 small teeth; femora of legs with a row of granules inferiorly, those of I not stronger than the others; tarsal segments fairly long and slender, tibia, metatarsus and tarsus of II as in fig. 33, *e*,

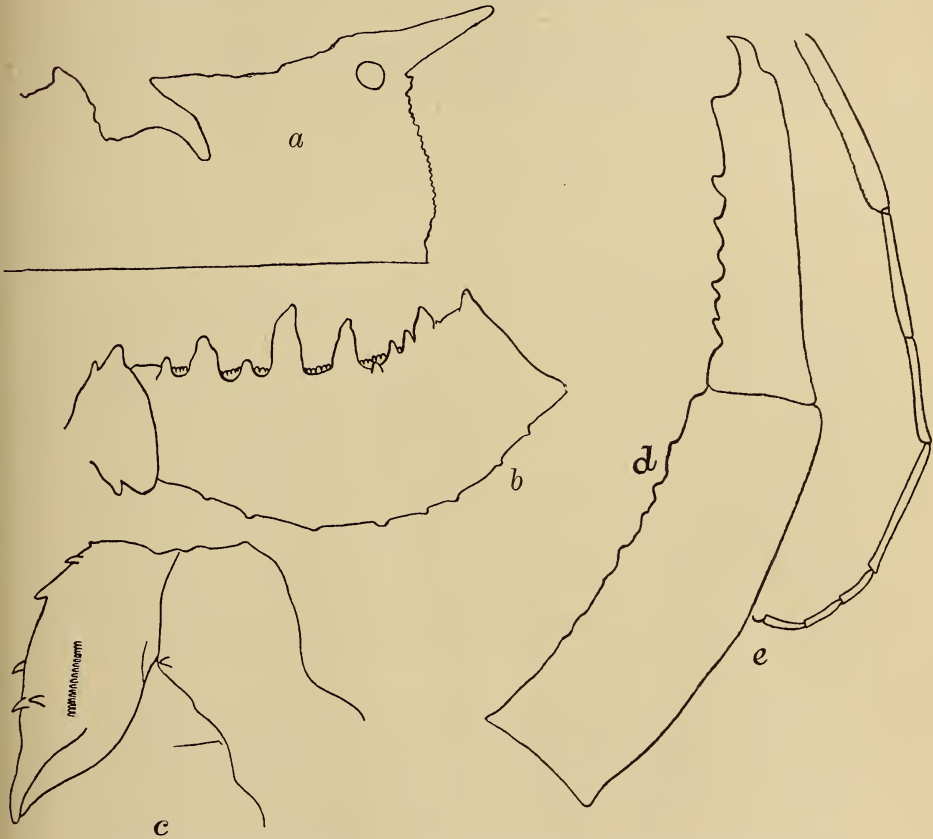


FIG. 33.—*Biacumontia cornuta*. *a*, ocular tubercle; *b*, femur of palp from outer side; *c*, chelicera; *d*, tibia-tarsus of palp; *e*, tibia-tarsus of leg II.

the articulation between calcaneus and astragalus well defined; tarsal segments 2:4:3:3.

*Measurements*.—Total length of body 2·8, pedipalps 4·5 mm.

♀. As in ♂ with the following differences: the posterior process of the ocular tubercle absent, the posterior and superior surfaces of the tubercle meeting at a right angle, anterior spine as in the ♂. Pedipalp: teeth on outer side of femur below much shorter and smaller than in the ♂; tibia and tarsus below with more numerous setae;

chelicera as in ♂, the tooth-like granules of segment II less numerous and smaller, its inner surface with a row of 14–16 comb-like teeth similar to that of ♂. The ♀♀ can be readily distinguished by the pedipalps, which are much shorter in proportion to the body than in the ♂.

*Measurements*.—Length of body 2·7, pedipalps 2·2 mm.

Types, 3 ♂♂, 1 ♀, Knysna, Cape Province.

*Biacumontia truncatidens* n. sp.

(Text-fig. 34, *a-g*.)

*Colour* yellow, legs a little darker.

Carapace and dorsal scute covered with small round granules, anterior margin of carapace without teeth or enlarged granules; ocular tubercle as in figs. 34, *a, b*, seen from the side, with a single terminal process; dorsal scute divided into areas by indistinct grooves, areas with 2 transverse rows of larger seta-tipped granules, those of areas I and II confined to the middle of the segment; area V in anterior half with an irregular row of larger seta-tipped granules, free tergites I and II with 1 row of larger granules in anterior half, some fine granules scattered amongst them, III free tergite with 2 rows of larger granules in anterior half; sternites with a row of round low granules in anterior half, otherwise matt; coxae smooth and shiny except apices of II and III and distal half of IV which are finely granular, coxa I with 2 tubercles along its anterior border.

Pedipalp as in figs. 34, *e, f*; femur with a row of about 11 teeth on outer under-surface, these differing from *cornuta* in being rounded and truncate, not pointed, patella unarmed, tibia as in fig. 34, *d*, with a few round granules distally below, curved, about  $1\frac{1}{2}$  times length of tarsus, tarsus with 3 small teeth on each side; chelicera as in fig. 34, *c*, segment I with 2 small teeth at upper apex, the outer side in the middle with 3 strong sharp teeth, segment II on inner side with a straight row of about 17 small comb-like teeth. Legs unarmed; calcaneus of metatarsus I about  $\frac{1}{2}$  the length of astragalus, calcaneus of metatarsus II (fig. 34, *g*) about  $\frac{1}{3}$  length of astragalus; tarsal segments 2 : 4 : 3 : 3.

*Measurements*.—Total length 3, pedipalps 5 mm.

Types, 3 ♂♂, Alicedale, Eastern Cape Province. Types in Albany Museum, Grahamstown.

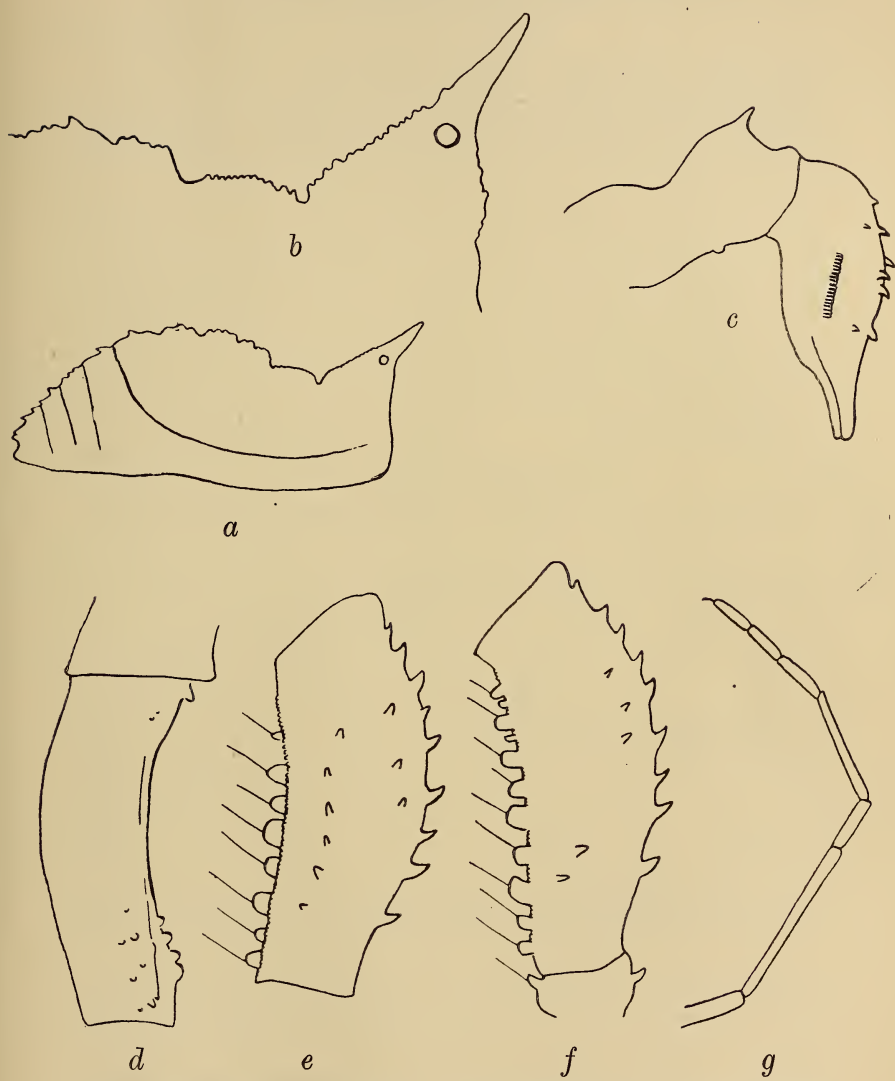


FIG. 34.—*Biacumontia truncatidens*. *a*, body from side; *b*, ocular tubercle; *c*, chelicera; *d*, tibia of palp; *e*, femur of palp from inner; *f*, from outer side; *g*, metatarsus-tarsus of leg II.

*Biacumontia fissidens* n. sp.

(Text-fig. 35, a-e.)

Colour light olive green, pedipalps light yellow.

Dorsal scute in general armed as in *B. truncatidens*; ocular tubercle as in fig. 35, a, seen from the side, armed with a single terminal

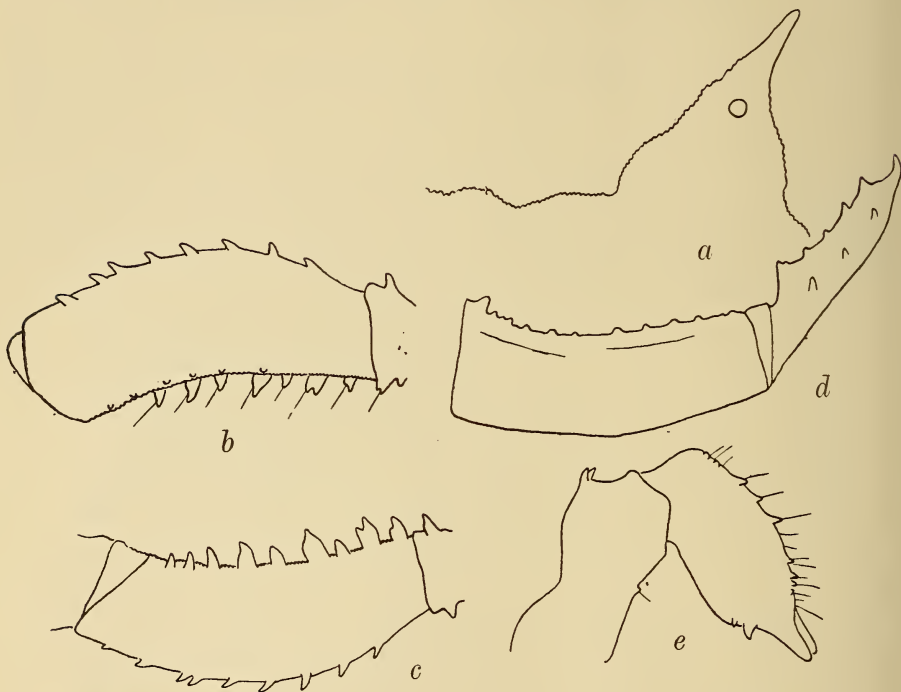


FIG. 35.—*Biacumontia fissidens*. a, ocular tubercle; b, femur of palp from inner; c, from outer side; d, tibia-tarsus of palp; e, chelicera.

process; grooves dividing the areas clearly visible in the middle but not extending to the sides of the scute to meet the lateral grooves, dorsal scute thickly and uniformly covered with small round granules; enlarged granules consisting of a single row of equal-sized seta-tipped granules in each area, those of areas I-III only present in the middle; area V and free tergites I-III all with a single row of larger granules, these segments with a background of small fine granules; sternites with a single row of fairly large round granules only at the sides, those of stigma-bearing sternite larger than those of the remaining sternites,



about 10 in number ; coxa IV with a row of 7-8 round granules along its posterior border, coxa III with 4, coxae otherwise as in *B. truncatidens*.

Pedipalp : femur seen from outer side as in fig. 35, *c*, seen from inner side as in fig. 35, *b*, a row of about 9 strong teeth on the outer under side, these teeth pointed or bifid but not rounded or truncate as in *B. truncatidens* ; a few low round granules on the inner side, and between these and the outer row of teeth the usual median strip of fine granulation ; tibia as in fig. 35, *d*, tarsus as in fig. 35, *d*, the outer side with a triangular tooth at the base and 4 other smaller teeth, inner side with 3 small teeth ; chelicera with 2 small teeth at the upper apex of segment I, segment II with a row of 17 minute comb-like teeth on inner side, a large and a small tooth on outer side near the apex (fig. 35, *e*). Legs : metatarsus I with calcaneus about  $\frac{1}{2}$  the length of astragalus, metatarsus II with calcaneus about  $\frac{1}{3}$  the length of astragalus ; tarsal segments 2 : 4 : 3 : 3.

*Measurements*.—Total length 3, pedipalps 5 mm.

Type, 1 ♂, East London. Type in Albany Museum, Grahamstown.

#### Gen. AUSTRONUNCIA n. gen.

Dorsal scute without transverse grooves dividing it into areas but with indistinct lateral and posterior grooves, without armature ; ocular tubercle low without a terminal spine or process ; stigmata on sternite I very clearly visible ; pedipalps long and armed with long and strong seta-tipped spines, chelicerae not armed with spines or teeth ; legs long and slender, tarsus I consisting of 4, II of 7-10 segments ; calcaneus of metatarsi I and II much shorter than astragalus ; femur I not armed below ; median prong of claws of tarsi III and IV stouter but not longer than the lateral prongs, tarsal segments 4 : 7-10 : 4 : 4 ; sexual dimorphism strongly pronounced, the pedipalps and chelicerae in the ♂ proportionally much longer than in the ♀ (pedipalps of ♂ almost 3 times the length of body, chelicerae as long as or longer than body).

One species, Western Cape Province.

#### *Austronuncia spinipalpis* n. sp.

(Text-fig. 36, *a-f*.)

♂. *Colour*.—Body and appendages olive green, infuscated black ; body as in fig. 36, *a*, carapace without granules along anterior margin,

ocular tubercle low, with a few small round granules above; dorsal scute not divided into areas by grooves, indistinct lateral and posterior grooves present; carapace finely shagreened, areas II-IV represented by transverse rows consisting of a few small seta-tipped granules (that of area II consisting of about 4), fifth area and free tergites I and II with a complete row of similar granules, III free tergite with 2 rows; free sternites with an indistinct row of granules, stigma-bearing

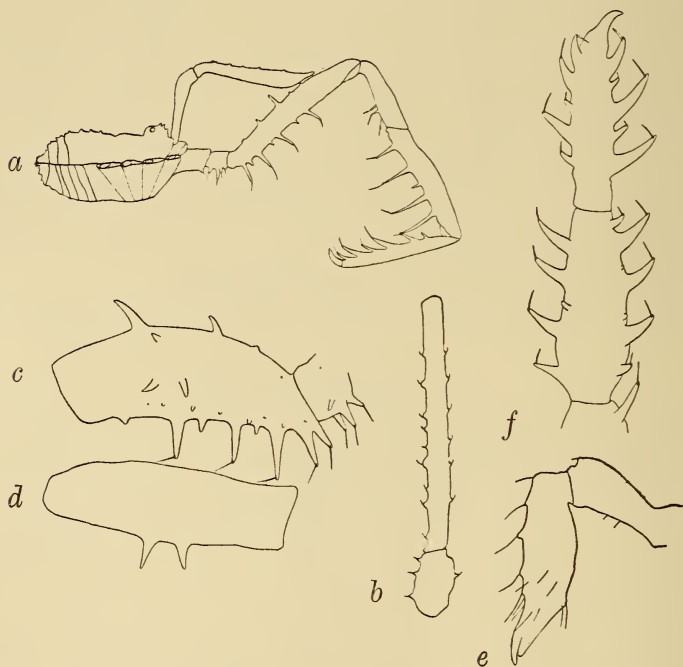


FIG. 36.—*Austronuncia spinipalpis*. ♂: a, body, chelicera, and palp from side; b, femur of leg I. ♀: c, femur of palp from inner side; d, from below; e, patella-tarsus of palp below; f, chelicera.

sternite with stigmatae very distinct; coxae below finely shagreened, not armed except in I, which has 2 irregular rows of conical seta-tipped spines. Pedipalp as in fig. 36, a, seen from the outer side; trochanter with 3-4 spines below; femur above with 4-5 teeth, of which only 1 is large, below with 4 large spines tipped with setae on the outer side and some smaller teeth between them, a row of denticles on the inner side below; on the inner surface near the middle 2 moderate teeth; patella with 2-3 inner and 1 outer tooth, the inner apical one the

longest; tibia with 4 long teeth on each side below, tarsus with 3 long alternating with 3 short teeth on each side below; chelicera with a row of small granules on the anterior surface of segment II but no teeth; femur I with some granules below (fig. 36, *b*), but not differentiated from the remaining femora; tarsal segments 4 : 10 : 4 : 4.

*Measurements.*—Length of body 2·5, chelicerae 3, pedipalps 7 mm.

♀. As in the ♂ but the pedipalps and chelicerae much shorter; armature of body as in ♂; pedipalp as in figs. 36, *c-e*, smooth and shiny without a background of fine granulation; femur below on the outer side with 4-5 large spine-like teeth, a row of 8 small round shiny granules on the inner side, the 2 teeth on the inner surface of femur larger than those of the ♂ (fig. 36, *d*, femur seen in profile from below); trochanter with 4 teeth below; patella, tibia, and tarsus as in fig. 36, *e*, patella with 2 outer, 1 inner teeth, tibia with 5 teeth on inner side, the basal and apical ones much smaller than the rest, outer side with 4 large equal-sized teeth; chelicera as in fig. 36, *f*, unarmed except for a row of 5 granules on the anterior surface of segment II, segment I with matt granulation on the inner side, outer side smooth; legs long and slender, tarsal segments 4 : 7-9 : 4 : 4.

*Measurements.*—Length of body 2·8, pedipalps 4·2 mm.

Types, 1 ♂, 5 ♀♀, Knysna Forest, Cape Province.

Gen. GRAEMONTIA n. gen.

Ocular tubercle with a single terminal spine; body armed with granules of two kinds, smaller granules swollen at their apices which are bilobed or trilobed and larger cylindrical granules which are considerably longer than wide; dorsal scute not divided by grooves into areas, these represented by distinct rows of granules (fig. 37, *a*); anterior margin of carapace with a row of bilobed granules on each side of the ocular tubercle; stigmatae hidden; coxa I below with 5 long conical seta-tipped spines along its anterior margin; pedipalp strongly armed with numerous long seta-tipped spines; inferior surface of femur without a median strip of fine granulation; calcaneus of all legs much shorter than astragalus; median prong of claws of tarsi III and IV stronger than the lateral prongs, the inner lateral prong much weaker than the outer lateral prong; tarsal segments I, 3; II, 6-8; III, 4; IV, 4; terminal section of I consisting of 2, II of 2 segments.

Two species, Eastern Cape Province.

## Key to species.

1. Dorsal scute with a smooth background, chelicerae without teeth (fig. 37, g)  
*bifidens*, p. 414.  
 Dorsal scute with a background of very fine granules, chelicerae toothed  
 (fig. 38, d) . . . . . *denticelis*, p. 415.

*Graemontia bifidens* n. sp.

(Text-fig. 37, a-h.)

Colour yellow brown with olive green infuscation.

Anterior margin of carapace with a row of about 8 bilobed club-shaped granules on each side of ocular tubercle, these not meeting in

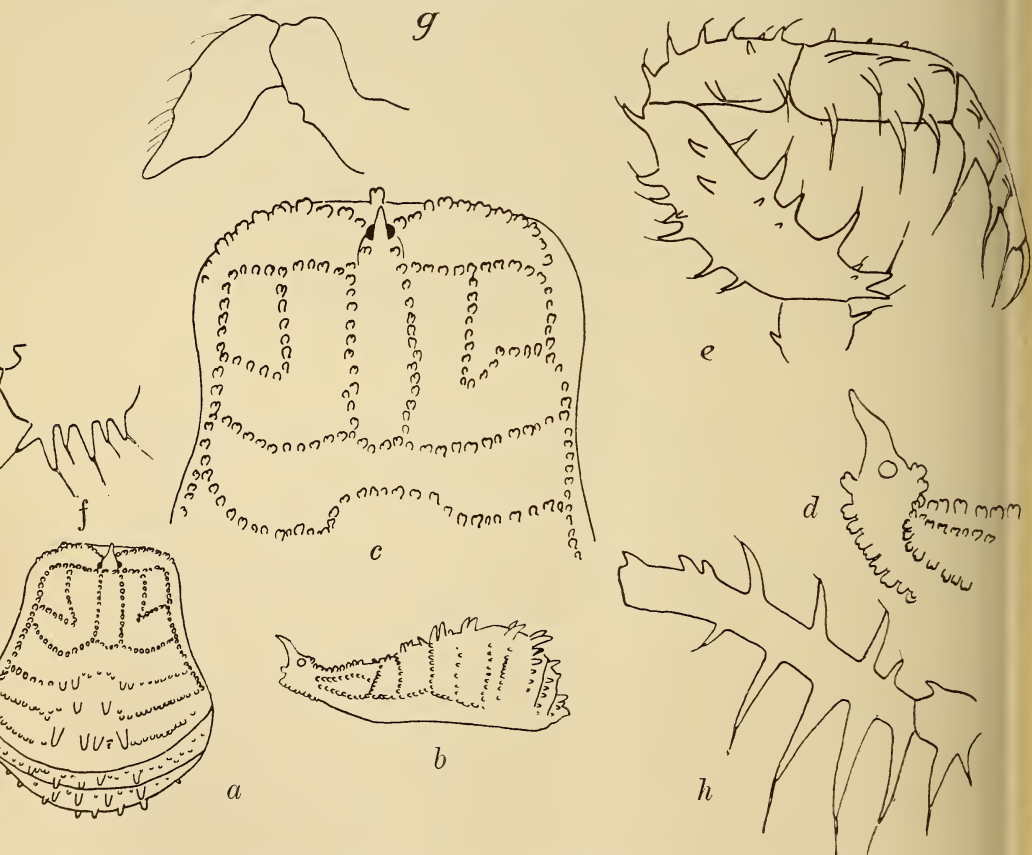


FIG. 37.—*Graemontia bifidens*. a, dorsal surface of body; b, body from side; c, anterior portion of body; d, ocular tubercle; e, palp; f, anterior margin of coxa I; g, chelicera; h, femur of leg I.



the middle line but curving upwards to the base of the ocular tubercle (fig. 37, *c*), a single similar isolated granule in front of ocular tubercle; seen from the side, ocular tubercle with a narrow terminal spine, 2 club-shaped granules on its posterior surface about the level of the eyes (fig. 37, *d*); carapace and dorsal scute with rows of lobed granules similar to those on anterior margin of carapace but a little smaller, arranged as in figs. 37, *a*, *c*; areas represented by transverse rows of lobed granules, areas I–II with 0, III with 2, IV and V with 4 long cylindrical granules in the middle in addition to the lobed granules; free tergites with 8–10 long cylindrical granules, some lobed granules amongst them; sternites matt with a well-spaced row of small round granules; inferior surfaces of coxae matt fairly smooth in the middle, the sutures forming their boundaries filled up with small round granules, anterior margin of coxa I with 5 seta-tipped papilliform granules as in fig. 37, *f*. Pedipalp as in fig. 37, *e*, seen from inner side armed with long slender spines, these tipped with stout setae, femur inferiorly without a strip of fine granulation in the middle; chelicera unarmed as in fig. 37, *g*. Legs: leg I with trochanter and femur armed as in fig. 37, *h*, femur with superior as well as inferior long spines, remaining segments unarmed, femora of remaining legs unarmed; coxa II with a row of 3 granules at its posterior margin near apex, the distal one much larger than the others, coxa IV with 5 granules on its anterior distal margin.

*Measurements*.—Total length 2.4, pedipalps 2.7 mm.

Types, 2 specimens (sex ?), Stones Hill, Grahamstown. Types in Albany Museum, Grahamstown.

*Graemontia denticheles* n. sp.

(Text-fig. 38, *a–d*.)

*Colour*.—Body light yellow with some greenish infuscation, legs olive green, pedipalps light yellow.

Dorsal scute with a background of small fine spicular granulation; anterior margin of carapace with a straight row of about 18 lobed granules not broken in the middle and curving up towards the ocular tubercle, these granules with more distinct lobes than in *bifidens*; ocular tubercle seen from the side as in fig. 38, *a*, with some lobed granules at the sides, 2 lobed granules above the marginal row anteriorly at the base of the ocular tubercle; lobed granules on carapace arranged in rows forming a pattern as in *bifidens* but less regular; large cylindrical granules on areas II–IV and free tergites not differing



so markedly from the smaller lobed granules as in *bifidens*; here, though longer than wide, they are divided into several small lobes at their apices, the sides provided with small granules, almost moruliform; areas with 2-4 larger granules in the middle, area V and free tergites with rows composed mostly of large cylindrical granules with some smaller ones filling the interspaces.

Pedipalp: femur as in fig. 38, *c*, seen from the inner side; chelicera as in fig. 38, *d*, the anterior surface of segment II with 2-3 large



FIG. 38.—*Graemontia denticelis*. *a*, ocular tubercle; *b*, anterior margin of coxa I; *c*, femur of palp; *d*, chelicera.

teeth; femur of leg I armed much as in *bifidens* (fig. 37, *h*), anterior margin of coxa I as in fig. 38, *b*; legs very long and slender, especially II; tarsal segments 3:8:4:4.

*Measurements*.—Length of body 2.6, pedipalps 3.8; leg II, 11.6 mm.

Type, 1 ♂, Hogsback, Amatola Mountains. Type in Albany Museum, Grahamstown.

#### Gen. MONOMONTIA n. gen.

Ocular tubercle stout and short, terminal process short; dorsal scute divided into areas by deep clear grooves passing across the scute

to meet the lateral grooves; dorsum comparatively smooth without large or modified granules, areas of dorsal scute with 2 rows of small granules; coxa I below with 2 tubercles along its anterior margin; pedipalps and chelicerae not strongly armed, femur of pedipalp with a row of strong teeth on outer side below, inferior surface with a strip of fine granulation in the middle; stigmatae hidden; femur of leg I armed below, tarsal segments of leg I short and deep; calcaneus of all legs much shorter than astragalus; median prong of claws of tarsi III and IV stronger than the lateral claws; tarsal segments I, 3; II, 3; III, 4; IV, 4.

Two species, Eastern Cape Province.

*Key to species.*

1. Pedipalp femur on outer side below with 4 teeth, inner surface with 3 teeth (fig. 39, *d*) . . . . . *atra*, p. 417.
- Pedipalp femur on outer side below with 6 teeth, inner surface with at least 7 teeth (fig. 40, *b*) . . . . . *ratrayi*, p. 418.

*Monomontia atra* n. sp.

(Text-fig. 39, *a-f*.)

*Colour*.—Body and legs blackish with a greenish tinge, carapace a little lighter, pedipalps with blackish reticulate infuscation except patella and tibia above, which are yellow.

Anterior margin of carapace with 2 small granules on each side of the ocular tubercle; ocular tubercle seen from the side (fig. 39, *c*), with 2 sharp granules on its posterior surface; background of dorsal surface of body quite smooth, area posterior to ocular tubercle with a few minute round granules in the middle; areas I–IV with 2 rows of granules, a row of larger conical seta-tipped granules in the middle, and a row of minute round granules along its posterior border (fig. 39, *a*); area V and free tergites with 1 row of larger granules; sternites with 1 anterior row of small granules; coxae smooth and shiny except II and IV which have a small distal patch of fine matt granulation, coxa I with 2 tubercles along its anterior margin, the distal one bifid.

Pedipalp: femur and trochanter seen from the inner side as in fig. 39, *d*, under surface of tibia smooth and slightly concave with 4 blunt seta-tipped teeth on each side below; tarsus with 3 sharp teeth on each side below; chelicera as in fig. 39, *f*, unarmed; leg I armed as in fig. 39, *e*, tarsal segments stouter and more thick-set than

those of remaining legs, remaining legs unarmed; tarsal segments 3:3:4:4.

*Measurements*.—Length of body 3·5, breadth 3, pedipalps 3 mm.

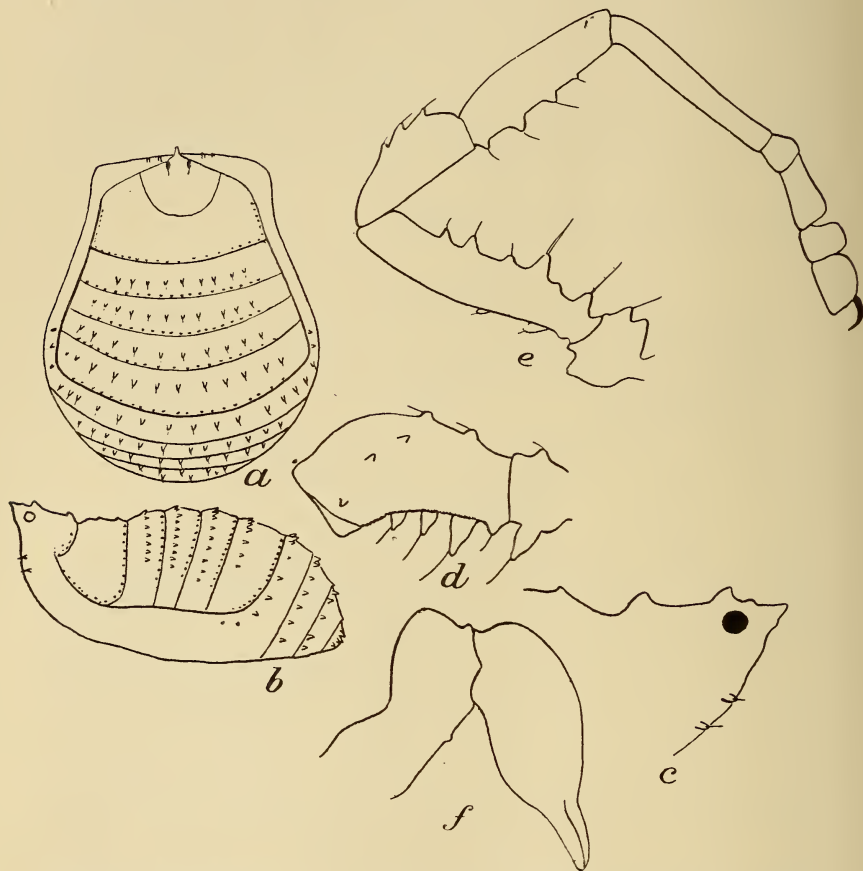


FIG. 39.—*Monomontia atra*. *a*, dorsal surface; *b*, lateral view of body; *c*, ocular tubercle; *d*, femur of palp from inner side; *e*, leg I; *f*, chelicera.

Type, 1 (♀ ?), Hogsback, Amatola Mountains. Type in the Albany Museum, Grahamstown.

*Monomontia rattrayi* n. sp.

(Text-fig. 40, *a-e*.)

*Colour*.—Body and legs blackish with a greenish tinge, pedipalps yellow, bases of femur and tibia, apical  $\frac{2}{3}$  of tarsus blackish.

Anterior margin of carapace with a few small indistinct granules on each side of ocular tubercle; ocular tubercle seen from the side as in

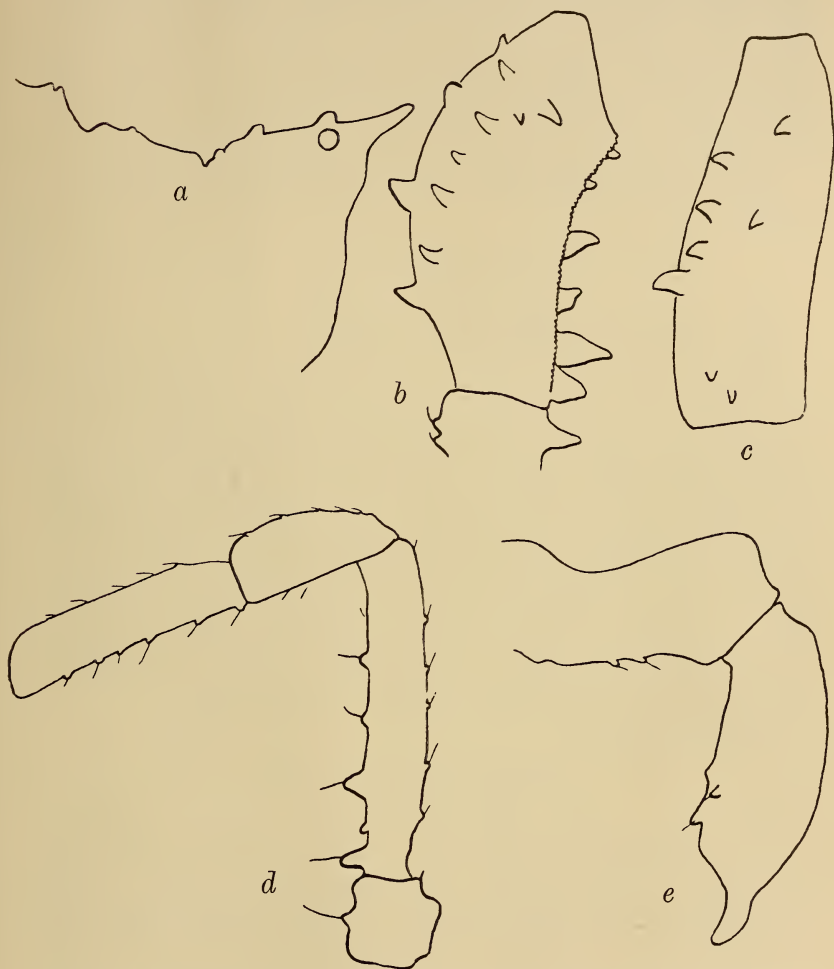


FIG. 40.—*Monomontia ratrayi*. *a*, ocular tubercle; *b*, femur of palp from inner side; *c*, from above; *d*, leg I; *e*, chelicera.

fig. 40, *a*, the terminal process longer and slenderer but otherwise resembling *atra*; segment posterior to ocular tubercle with 2 rows of minute granules along its posterior border, otherwise dorsal scute and free tergites armed as in *atra*; sternites and coxae as in *atra*.

Pedipalp: femur seen from inner side as in fig. 40, *b*, inner surface

of femur near upper side with 5 teeth, 2 lower teeth in the middle near distal apex, inferior outer surface with a row of 6 teeth, the 2 distal ones much smaller than the rest; tibia on outer side with 6, on inner side with 4 granules, none of these large or distinct, inferior surface sparsely granular; chelicera as in fig. 40, *e*; tarsus on outer side near the base with a low bilobed tooth and 4 other minute teeth, inner side with 3 teeth; leg I armed as in fig. 40, *d*; tarsal segments 3 : 3 : 4 : 4.

*Measurements*.—Length of body 2·9, breadth 2·6, pedipalps 4 mm.

Types, 2 (♂♂) ?, East London. Types in Albany Museum, Grahamstown.

Gen. ACUMONTIA Loman.

1898. Loman, Zool. Jahrb. Syst., ii, p. 528.

1923. Roewer, Die Weberknechte der Erde, p. 609.

Carapace smaller than scutum; anterior margin of carapace without grooves and its upper surface on each side with or without teeth; ocular tubercle rising directly from the anterior margin of carapace and with I median spine; areas I–IV with a pair of tubercles or spines in the middle; area V and free tergites I–III unarmed or with 1 pair of spines or tubercles in the middle; stigmatae hidden; femur of leg I armed below; calcaneus of metatarsi I–IV much shorter than astragalus; terminal section of tarsus I consisting of 2 segments, that of II of 3 segments; tarsus I with 5 segments, II with more than 6 segments, III and IV with each 4 segments; median prong of claws of tarsi III and IV much stouter than the lateral prong.

One species, Natal.

*Acumontia natalensis* n. sp.

(Text-fig. 41, *a–e*.)

*Colour* olive brown, carapace and dorsal scute at the sides with some lighter patches; carapace finely shagreened; anterior margin of carapace without teeth at the sides; dorsal scute finely shagreened, not divided into areas by transverse grooves, the areas represented by transverse rows of granules not reaching the sides, a pair in the middle of each row enlarged and spine-like (fig. 41, *a*), the third pair the largest; fifth area and the free tergites with a transverse row of granules reaching to the sides; ocular tubercle as in fig. 41, *a*, seen from the side; sternites finely shagreened with a row of small granules in the middle; coxae finely shagreened, I with an anterior row of 4 long conical seta-tipped spines, II with a single row of small granules in the middle, III and IV without granules. Pedipalp,



especially tibia and tarsus, armed with long spine-like teeth which are provided at their tips with stout setae, some of which are bent at right angles to the teeth; trochanter with 2 spines below, one of which is

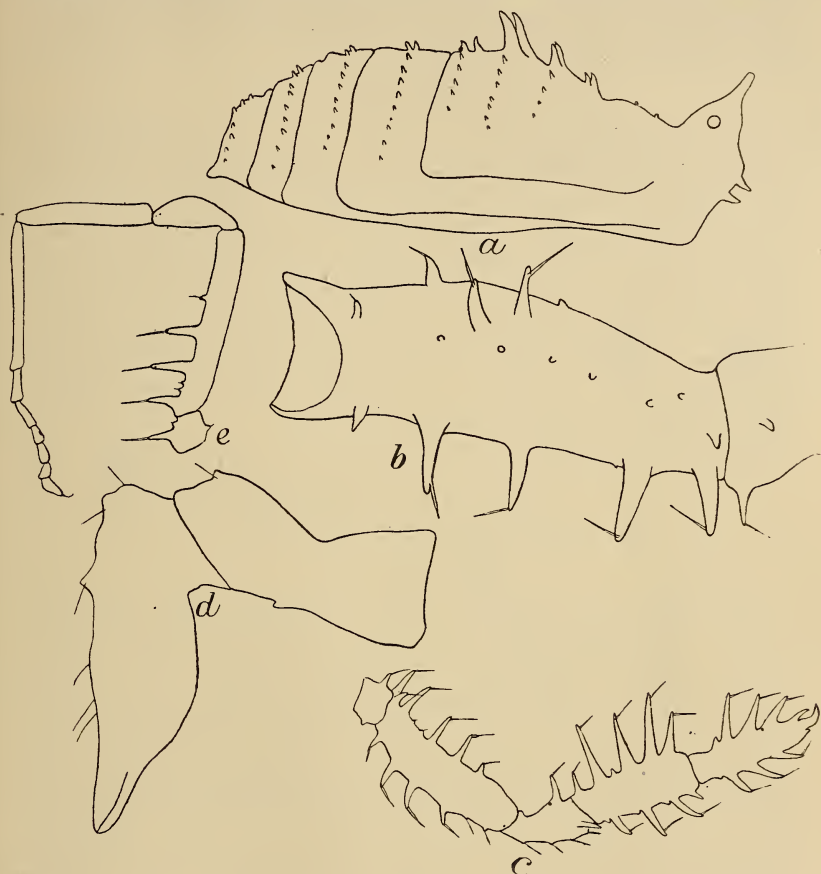


FIG. 41.—*Acumontia natalensis*. a, body from side; b, femur of palp below; c, palp; d, chelicera; e, leg I.

minute, 1 denticle above; femur as in fig. 41, c, seen partly from the side, partly from below, with 4 spines above, and seen from below (fig. 41, b), 4 large teeth below along the outer side and a row of about 6 round denticles on the inner side; inner surface with 2 large teeth; patella, tibia, and tarsus strongly armed with long spine-like teeth (fig. 41, c); chelicera as in fig. 41, d; leg I with femur armed as in fig. 41, e; tarsal segments 5 : 10-11 : 4 : 4.

*Measurements*.—Length of body 4, pedipalps 4·8 mm.

Type, 1 specimen, Pietermaritzburg, Natal.

This species differs from the 5 other species of this genus (all from Madagascar) in the absence of teeth along the upper anterior margin of the carapace.

Gen. SPELEOMONTIA n. gen.

Dorsal scute without grooves dividing it into areas, unarmed except for granules in the middle, ocular tubercle without a spine or process, low, rounded, and sloping backwards from the anterior margin of carapace, eyes far apart; stigmæ visible on stigma-bearing sternite; pedipalps armed with numerous long teeth which are tipped with long setae; chelicerae unarmed; legs slender and long, longer than in other genera of *Triaenonychinae*; tarsus I consisting of 5, II of about 14 segments; median prong of claws of tarsi III and IV shorter than the lateral prongs; calcaneus of metatarsi I and II much shorter than astragalus; tarsal segments 5 : 14 : 4 : 4.

One species, Western Cape Province.

*Speleomontia cavernicola* n. sp.

(Text-fig. 42, *a-f*.)

*Colour* light brown, lighter beneath, legs light yellow, eyes surrounded by a pigmented area; dorsum of body covered with a shagreen of fine small granules, the larger granules with a short posteriorly-directed seta; ocular tubercle low, seen from above about its own distance from the anterior edge of carapace (fig. 42, *b*), the eyes set wide apart surrounded by a blackish ring, upper surface of tubercle between the eyes with 1 or 2 granules armed at their tips with a short seta; dorsal scute not divided by grooves into areas, indistinct lateral and posterior grooves present; areas represented by 4 transverse rows of small granules; areas I–III represented at most by about 4 granules, only the row of area IV reaching the sides; free tergites with their posterior margins rimmed and rounded, a row of granules in the middle of each; sternites and coxae finely shagreened, coxa I with about 4 small club-shaped seta-tipped tubercles along its anterior margin; posterior margin of coxa I and anterior margin of coxa III with some small conical granules at their distal apices. Pedipalp seen from the inner side as in fig. 42, *c*; chelicera as in fig. 42, *e*, seen from above segment I, with 2 small brown teeth at distal dorsal apex; segment II with a small rounded tubercle armed with a seta at

its base dorsally; legs long and slender, femur I as in fig. 42, *f*, provided with small round tubercles tipped with setae, not differently armed from the remaining legs; claw of tarsus IV as in fig. 42, *d*, the lateral prongs a little longer and about as stout as the median prong; tarsal segments 5 : 13-15 : 4 : 4; in one specimen the tarsal segments of leg

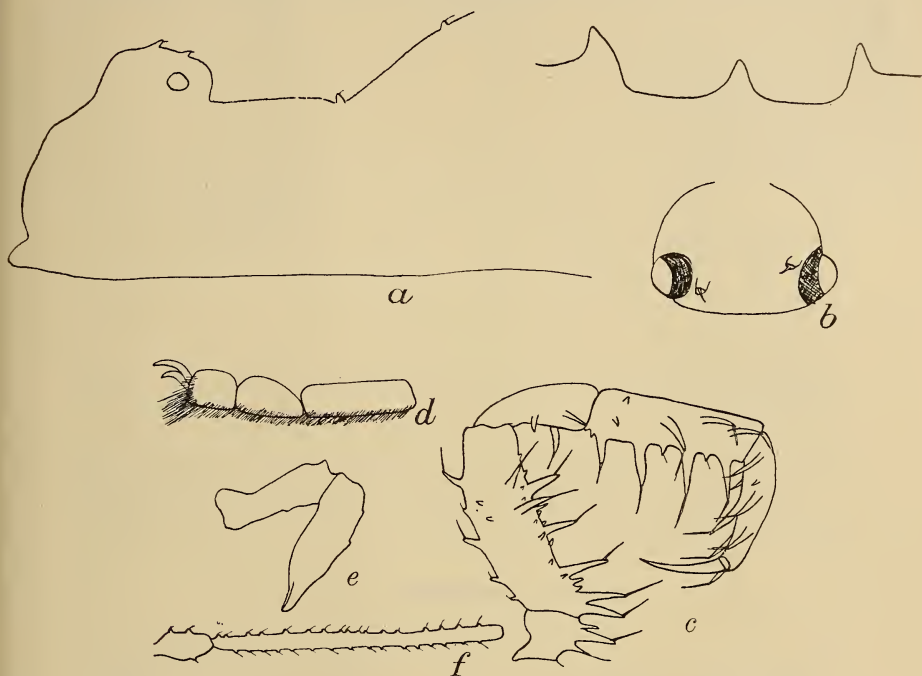


FIG. 42.—*Speleomontia cavernicola*. *a*, ocular tubercle from the side; *b*, from above; *c*, palp; *d*, tarsus IV; *e*, chelicera; *f*, femur of leg I.

I number 4 while in another they number 4 on the one and 5 on the other leg.

*Measurements*.—Length of body 3, pedipalps 4·7; leg I, 8·4; II, 15·9; III, 10·5; IV, 15 mm.

*Types*, 6 specimens (4 ♂♂, 2 juvs.) from the Wynberg Caves, Table Mountain, Cape Town. This species has only been found in this locality about 100 feet below the ground surface in complete darkness; some were found under stones, others in damp crevices between the rocks; in the same cave occurs *Speleosiro argasiformis*, a blind *Peripatus* — *Peripatopsis alba*, and a small Orthopteron — *Speleiacris tabulae*; for a further description of the cave see p. 350.

TABLE OF GENERIC CHARACTERS OF TRIAENONYCHINAE.

Genus.	Stigmae exposed.	Median prong of claws tarsi III-IV > lat. prongs.	Calcaneus much < astragalus	2 tubercles on anterior margin of coxa I.	Dorsal scute divided into areas by grooves.
<i>Ceratomontia</i> (2)	—	+	+	+	+
<i>Mensamontia</i> (3)	—	+	+	—	+
<i>Roeweria</i> (3)	—	—	+	+	—
<i>Amatola</i> (3)	—	+	+	+	—
<i>Rostromontia</i> (3)	—	+	+	except <i>R. lisposoma</i>	+
<i>Cryptobunus</i> (3)	—	+	—	1 tubercle	—
<i>Biacumontia</i> (2)	—	+	—	+	+
<i>Austromontia</i> (3)	—	+	±	+	+
<i>Austronuncia</i> (4)	+	+	+	—	—
<i>Acumontia</i> (5)	—	+	+	—	—
<i>Speleomontia</i> (5)	+	—	+	—	—
<i>Graemontia</i> (3)	—	+	+	—	—
<i>Monomontia</i> (3)	—	+	+	+	+

The numbers in brackets after names of the genera represent the number of segments of the first tarsus.

#### SUBFAM. **Adaeinae** Pocock.

(Text-fig. 43, *a-e*.)

1903. Fam. *Adaeidae* Pocock, Ann. Nat. Hist., ser. 7, x, p. 513.

1914. *Adaeinae* Roewer, Arch. Naturg., lxxx, A, fasc. 12, p. 141.

1923. „ „ Die Weberknechte der Erde, p. 619.

The subfamily comprises genera containing Triaenonychids of large body size which with the exception of *Micradaeum* varies from 4.5 to 7.6 mm. The shape of the sternum varies far more than in the *Triaenonychinae* but can be separated into two main types: A. (figs. 43, *d, e*). The sternum is triangular and wedge-shaped, widening regularly but gradually towards the base, without a lance-shaped expansion anteriorly or lateral expansions posteriorly; to this division belong *Adaeum*, *Adaeulum*, *Metadaeum*, *Micradaeum*, and *Cryptadaeum*. B. (figs. 43, *a, b*). The sternum is roughly pentagonal in shape and may be slender as in *Larifuga* or broad and stout as in *Montadaeum* and *Paradaeum*. The dorsal scute is always covered

with granules forming definite patterns or irregularly disposed. The stigmæ, with the exception of *Paradaeum*, are hidden under granules bridging the cleft between coxa IV and stigma-bearing sternite.

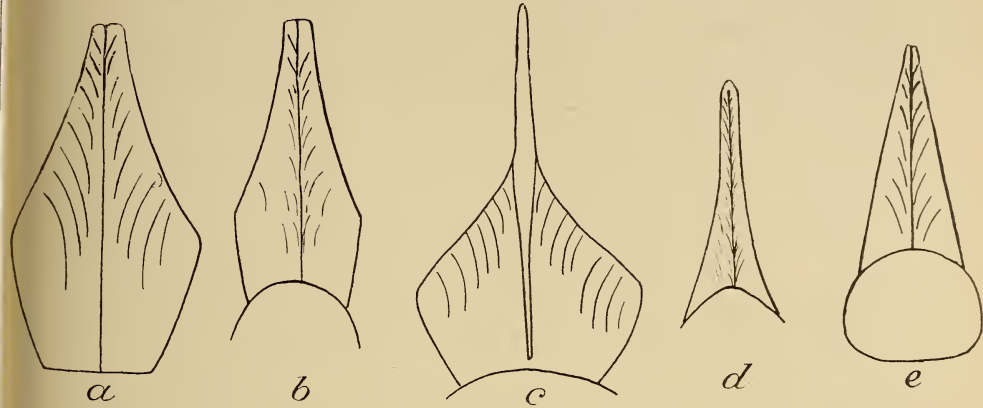


FIG. 43.—*Adaeinae*. a, *Montadaeum*; b, *Larifuga*; c, *Paradaeum*; d, *Adaeulum*; e, *Cryptadaeum*.

Tarsus II is composed, except in *Micradaeum*, of numerous (8-16) segments.

Eight genera in South Africa.

#### Key to genera.

1. Sternum more or less pentagonal . . . . . 2.  
    Sternum triangular . . . . . 4.
2. Sternum broadly pentagonal in posterior half, a narrow parallel-sided rod forming its anterior half (fig. 43, c), stigmæ exposed . *Paradaeum*, p. 466.  
    Sternum without an anterior rod-like expansion, stigmæ hidden . . . . . 3.
3. Tarsus I with 4 segments, sternum more than twice as long as broad (fig. 43, b) *Larifuga*, p. 450.  
    Tarsus I with 5 segments, sternum less than twice as long as broad (fig. 43, a) *Montadaeum*, p. 464.
4. Tarsus I with 4 segments . . . . . 5.  
    Tarsus I with 3 segments . . . . . 6.
5. Sternum narrowly triangular (fig. 43, d) . . . *Adaeulum*, p. 426.  
    Sternum broadly triangular (fig. 43, e) . . . *Cryptadaeum*, p. 445.
6. Tarsus II with 4 segments . . . . . *Micradaeum*, p. 448.  
    Tarsus II with more than 6 (8-11) segments . . . . . 7.
7. Terminal section of tarsus II with 3 segments . . . *Adaeum*, p. 435.  
    Terminal section of tarsus II with 4 segments . . . *Metadaeum*, p. 444.





slope covered with numerous minute granules and 1 or 2 larger tooth-like ones; posterior margin of dorsal scute with a row of about 8 enlarged conical granules and behind this an irregular row of minute granules; free tergites with an anterior and posterior row of minute granules, a row of enlarged conical granules between them; sternites with an anterior marginal and a middle row of small granules; inferior surfaces of coxae I and II covered with granules, those of I more

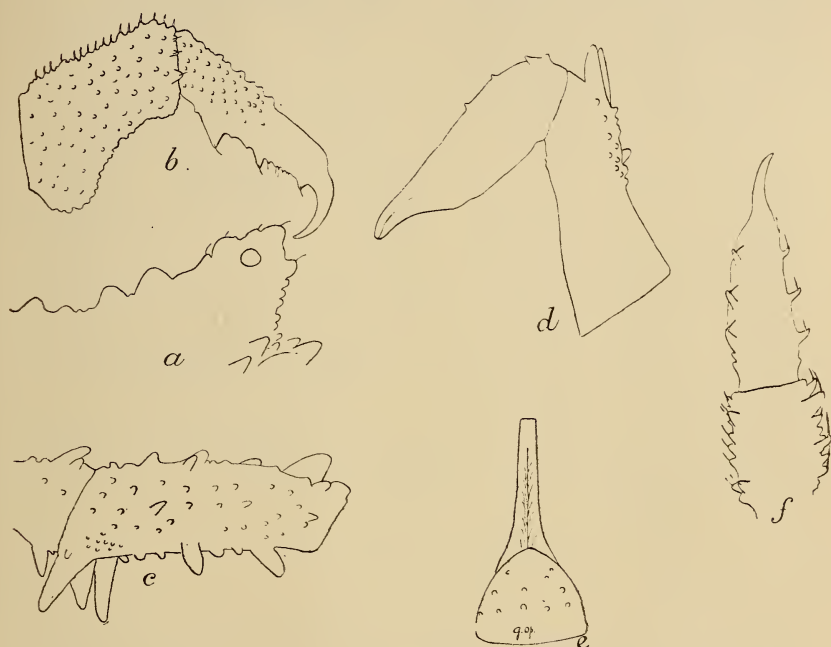


FIG. 44.—*Adaeulum natalense*. ♂: a, ocular tubercle; b, tibia-tarsus of palp; c, femur of palp, outer side; d, chelicera; e, sternum (*g.op.*, genital operculum); f, tibia-tarsus of palp of ♀.

conical, 2 at the distal anterior margin larger than the rest, III sparsely covered with granules, IV with only a few scattered granules; the granules filling up the cleft between coxa IV and stigma-bearing sternite few in number; posterior distal margin of coxa II with 3-4 long conical seta-tipped granules; sternum as in fig. 44, e, widening near the base, not tapering regularly as in *A. coridens* nor roughly pentagonal as in *Larifuga*, compare fig. 42, b; pedipalp, seen from outer side as in fig. 44, c; trochanter with 2 teeth above, 1 below; femur above on outer side with a row of 3 stout teeth, the apical one larger than the rest, below with 3 stout basal teeth and 2 much smaller

outer teeth, 2 stout contiguous teeth on inner side at apex ; whole of femur strongly rugose except on inner side ; patella unarmed, tibia seen in profile (fig. 44 *b*), with a peculiar swelling at its base inferiorly, without teeth but the whole segment strongly granular, tarsus with 3 teeth on each side, granular except distally ; chelicera as in fig. 44, *d* ; segment I rugose above with 2 fairly large teeth at its distal apex, shagreened at the sides ; segment II shiny with a few small tooth-like granules on its anterior surface ; femur of leg I not armed with spines below, similar to the femora of remaining legs, covered with fine granules ; tarsal segments 4 : 17-18 : 4 : 4.

*Measurements*.—Length of body 5·9, breadth 4, pedipalps 4·5 mm.

♀. As in ♂, the granulation of body similar except that the tooth-like granules on anterior upper margin of carapace are smaller ; all coxae equally and thickly granular ; pedipalp much smaller than in ♂ ; trochanter with 1 tooth below, 2 small teeth above ; femur with 2 basal teeth (smaller than in ♂), 2 small teeth on outer side, 3-4 moderate intero-dorsal teeth ; patella with 2 spines on inner side, tibia and tarsus as in fig. 44, *f*, tibia not swollen inferiorly as in ♂ ; chelicera as in ♂, the 2 teeth at distal dorsal apex of segment I smaller ; tarsal segments 4 : 14-18 : 4 : 4.

*Measurements*.—Length of body 7, breadth 4·5, pedipalps 3·8 mm.

Types, 3 ♂♂, 9 ♀♀, Pietermaritzburg, Natal. This species represents a form intermediate between *Larifuga* and *Adaeulum*.

*Adaeulum godfreyi* n. sp.

(Text-fig. 45, *a-g*.)

♂. *Colour* olive green or earthy brown from the coating of fine particles of sand and earth adhering to and partly filling up the interspaces of the granules.

Dorsum with granulation as in fig. 45, *a*, seen from above ; divided by transverse strips and a double longitudinal median strip of granules into 6 smooth subquadrate areas on each side, the last one incomplete, II to VI representing the 5 areas ; seen from the side, the longitudinal rows in each area form small tumuli of undifferentiated granules (fig. 45, *b*) ; anterior margin of carapace with a group of close-set cylindrical granules forming a cone-shaped projection in front of ocular tubercle ; ocular tubercle unarmed but granular, especially posteriorly ; posterior border of dorsal scute and free tergites with an anterior irregular row of small granules and a posterior more regular row composed of 8-12 long cylindrical granules with

slightly swollen apices tipped with short setae; these long cylindrical granules well separated, the interspaces filled up with smaller cylindrical granules (fig. 45, *c*); sternites with small granules in anterior half,

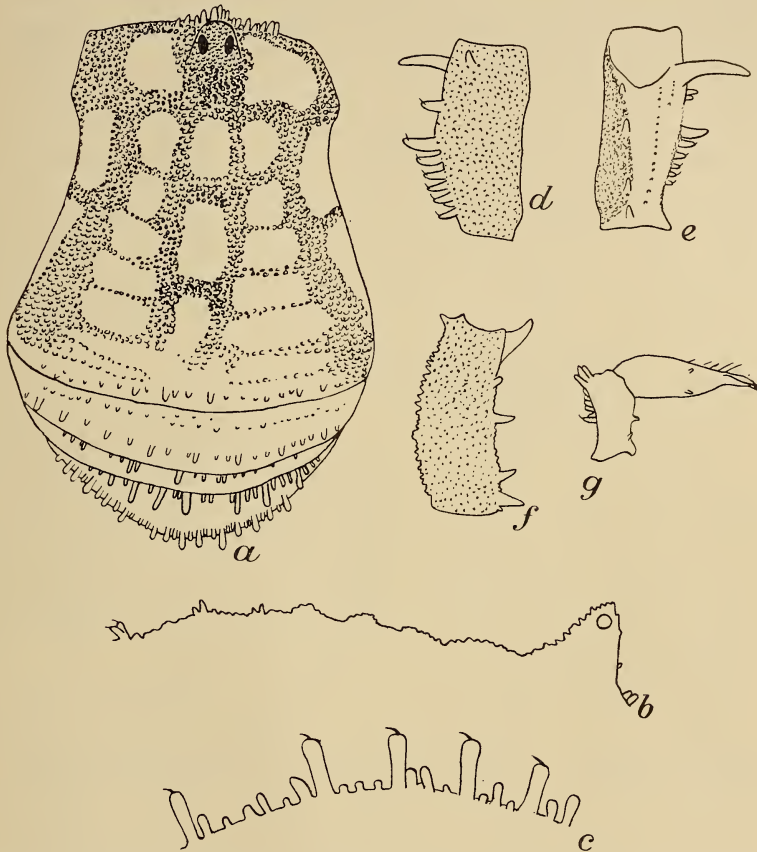


FIG. 45.—*Adaeulum godfreyi*. *a*, dorsal surface of body; *b*, ocular tubercle; *c*, profile of free tergite II; *d*, femur of palp above; *e*, below; *f*, from outer side; *g*, chelicera.

smooth in posterior half; coxae thickly granular except IV which is more or less smooth in the middle, the granules at the bases of all coxae and those along the anterior margin of coxa I enlarged and conical; stigma-bearing sternite thickly covered with granules, the cleft between it and coxa IV filled up with granules; genital operculum with about 12 small seta-tipped papillae.

Pedipalp: femur seen from above as in fig. 45, *d*; a row of 6 teeth



on the inner upper side, the distal one largest, the rest decreasing in size proximally; seen from below (fig. 45, *e*), the inner and under surface of femur between these teeth and the 4 teeth on under outer surface (fig. 45, *f*, seen from the outer side) smooth, except for a longitudinal row of small granules in the middle; remainder of femur rugose, covered with small granules; apex of femur at inferior inner angle with a long curved tooth (the convexity of the curve directed downwards), this tooth much larger than any others of the pedipalp, its axis at right angles to the axis of the femur and pointing directly inwards, its length subequal to that of patella; patella and tibia rugose, without teeth, tarsus smooth and shiny except proximal  $\frac{2}{3}$  above which is rugose, 3 teeth on inner, 0 on outer side. Chelicera as in fig. 45, *g*; segment I at upper apex with 2-3 teeth, the middle one the largest. Legs strongly rugose, femur I not specially armed but with a few granules below; terminal section of tarsus II consisting of 4 segments; tarsal segments 4:13-15:4:4.

*Measurements*.—Length of body 6.7, breadth 5.8, pedipalps 5.8 mm.

♀. Arrangement of granules on dorsum of body similar to that of ♂; pedipalp much shorter and smaller than in the ♂, the intero-superior teeth of femur smaller, the large tooth at intero-inferior apex of femur replaced by 2 smaller teeth; the row of granules in the middle of the inferior surface of femur represented by larger tooth-like and conical granules, these about 7 in number; 1 small tooth-like granule at upper apex of segment I of chelicera; terminal section of tarsus II consisting of 4 segments; tarsal segments 4:12-13:4:4.

*Measurements*.—Length of body 6.3, breadth 4.2, pedipalps 3.3 mm.

Types, 1 ♀, 1 ♂. Pirie, Eastern Cape Province. Collected by the Rev. R. Godfrey. The species belongs to the *coxidens* and *bicolor* group in having an enlarged tooth on femur of pedipalp; it differs from the former in having no enlarged teeth on inferior surface of coxa II, from the latter in the enlarged tooth of pedipalp femur springing from the apex and not the middle of the femur, etc.

*Adaeulum coxidens* n. sp.

(Text-fig. 46, *a-g*.)

♂. *Colour* brown, metatarsi and tarsi of legs, under surface of pedipalps distinctly lighter; dorsal scute with a double median row of tubercles composed not of one enlarged granule but of a cluster of small granules forming a low tumulus (fig. 46, *a*); transverse rows of minute granules dividing dorsal scute into the usual 4 areas, these



granules forming aggregations at the sides; a fifth pair of ill-defined areas behind the ocular tubercle, another area on each side of the ocular tubercle, all these areas smooth and shiny; posterior margin of dorsal scute and free tergites I and II with a transverse row of cylindrical papilliform granules with slightly swollen tips, free tergite III with triangular granules; ocular tubercle rounded as in fig. 46, *a*;

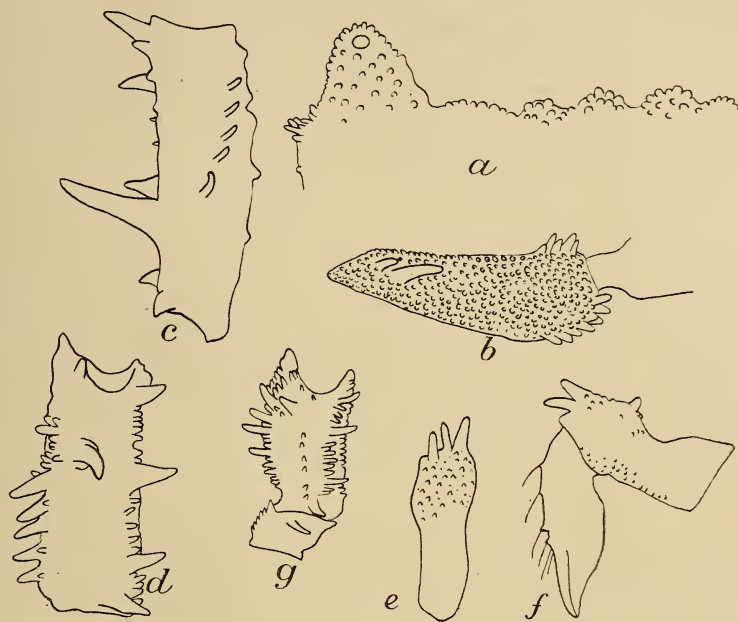


FIG. 46.—*Adaeulum coxidentis*. ♂: *a*, ocular tubercle; *b*, coxa II; *c*, femur of palp from inner side; *d*, from below; *e*, segment I of chelicera from above; *f*, from side. ♀: *g*, femur of palp below.

sternites irregularly granular anteriorly; inferior surfaces of coxae, genital operculum, and the cleft between coxa IV and stigma-bearing sternite thickly and evenly granular, coxa I with a row of conical granules along its anterior margin larger than the others; inferior surface of coxa II with 2 stout teeth arising from the granules near its base, slightly curved, pointing upwards and outwards, the distal one considerably larger than the proximal one (fig. 46, *b*); these teeth are not present in any other species of *Adaeinid* I have examined, and they occur in both the males though not the females; genital operculum with 5 papillae tipped with setae. Pedipalp: trochanter seen from below with 3 teeth, the middle largest, the inner one

minute; femur seen from below (fig. 46, *d*), with 4 enlarged teeth on the outer side and between them some small tooth-like granules; on the inner side an oblique row of 6-7 teeth, the fifth from the base large, the 2 distal ones small (fig. 46, *c*); ventrally a very large tooth arising just anterior to the middle of the femur and pointing downwards and a little inwards, at the inner side apically a blunt tubercle; patella unarmed, tibia and tarsus with some inconspicuous teeth on each side. Chelicera: segment I seen from above with a rugose patch in apical half ending distally in 3 blunt teeth (fig. 46, *e*); segment II seen from the side (fig. 46, *f*), with a row of denticles in front; femur of leg I not armed, similar to remaining legs, with 4 dorsal seta-tipped granules in basal half; tarsal segments 4: 12-13: 4: 4.

*Measurements*.—Length of body 6·7, breadth 4·3, pedipalps 7 mm.

♀. Armature of body as in ♂, the granules and papillae smaller; femur of pedipalp as in fig. 46, *g*, seen from below, trochanter with 2 spines below, patella with 2 spines on inner side, tibia with about 4, tarsus with 3 spines on each side; chelicera as in ♂ except that there are 2 teeth at the distal apex above; legs as in ♂; coxa II without 2 teeth near the base; tarsal segments 4: 13-14: 4: 4.

*Measurements*.—Length of body 7·3, breadth 4·3, pedipalps 5 mm.

This species is related to *A. areolatum* from Grahamstown.

Types, 2 ♂♂, 2 ♀♀, Amatola Mountains, Eastern Cape Province.

#### *Adaeulum areolatum* Pocock.

The following is Pocock's description, Proc. Zool. Soc., 1902, pt. 2, p. 401:—

“♂. *Colour* yellowish brown, generally obscured by the mud or mould adhering to the granules. Dorsal scute with anterior border convexly rounded and thickly beset with cylindrical papillae; ocular tubercle thickly granular, convexly rounded on the summit; behind the tubercle are two parallel rows of tubercles extending to the posterior border of the scute and forming segmental excrescences; midway between these and the lateral border is another irregular band of granules extending from the antero-lateral angle; there are also narrow transverse rows of granules extending across the scute from side to side and passing between the submedian granular excrescences; the interspaces between and defined by the bands of granules form subquadrate smooth depressed areas. The posterior border of the scute and of the three following tergites with a row of papilliform tubercles; the rest of the tergal plates thickly granular. Sterna

granular anteriorly. Coxae thickly granularly papillate. Genital sternum with seven long hair-tipped papillae. Sternum of cephalothorax, the adjacent area of the 3rd coxa, and the maxillary process of the 2nd coxa forming a smooth and shining depression flanked on each side by papillae arising from the coxae.

“Mandibles with the basal segment granularly tubercular above, with one or two longer papillae distally; second also with some sharp tubercles in front. Palpi thicker than the legs, thickly granular; the femur at the base on the inner side with four strong spines and one more distal, and beneath with one smaller and three strong spines, and one strong spine on the inner side inferiorly; tibia, patella, and tarsus subequal in length; the tibia without distinct and large paired spines beneath; tarsus with three pairs of longer spines in addition to the tubercles; claw short.

“Legs tubercular and granular, unspined, even the femur of the 1st hardly spined below; some longish cylindrical papillae on the outer side of the 2nd and 4th coxae; tarsal segments 4:11:4:4.

“♀. Differs from ♂ in that the papillae on the anterior border of the carapace are shorter and form a median angular projection; the spines on the base of the inner side of the femur of the palp are much smaller and the tibia is armed internally with longer hair-tipped papillae.

“Measurements in mm.: (♂) Total length 7·5; palpus 5; 1st leg 8, 2nd 13, 3rd 9, 4th 12.

“Loc. Grahamstown in S. Africa (Dr. Schonland).”

The Museum has 1 ♂ from Doornek, Alexandria Division, Eastern Cape Province. The Albany Museum, Grahamstown, has specimens from East London, Cathcart, Coldsprings, Port Alfred, Somerville, Grahamstown.

*Adaeulum bicolor* n. sp.

(Text-fig. 47, a-g.)

♂. *Colour* of body above brown, metatarsi of legs light brown, tarsal segments yellow, body below chocolate brown, a crescentic patch on the last sternite and anterior border of anal plate yellow; coxa I below yellow, a triangular spot near its distal apex brown, remaining coxae brown, the inner edges bordering the sternum yellow; pedipalps with the rugose areas brown, the smooth portions yellow; femur, patella, and tibia above and at the sides chocolate brown, sharply demarcated from the yellow ventral surface, tarsus brown in basal half above, the rest yellow; chelicerae with a brown spot above in segment I, the rest yellow. Anterior upper margin of carapace

with a close-set comb-like row of papillae; ocular tubercle seen in profile as in fig. 47, *a*; dorsum of body with papilliform granules of which the enlarged ones are cylindrical and longer than wide, the crevices between the granules filled up with sand and grit giving the body a brown and rugose appearance; dorsal scute with 2 central rows of tubercles each containing a group of cylindrical papillae

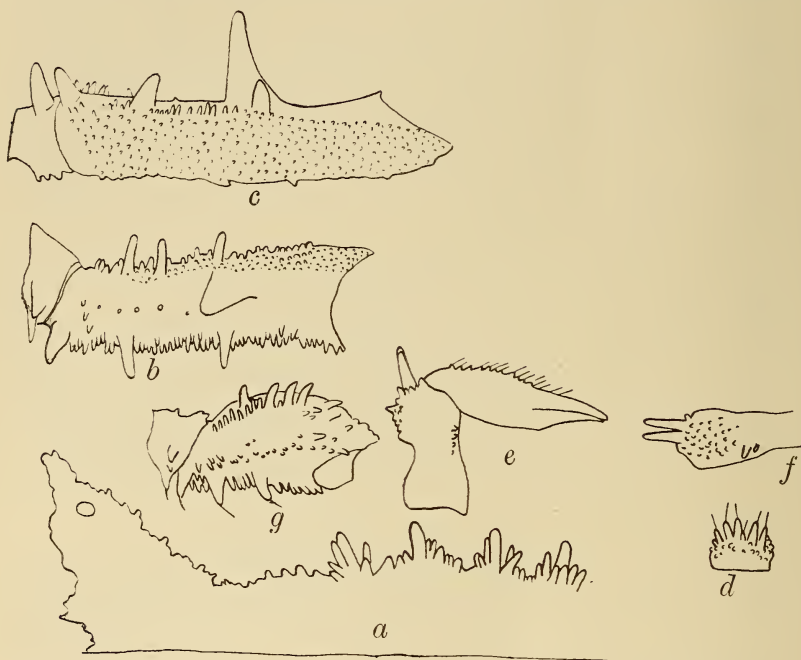


FIG. 47.—*Adaeulum bicolor*. ♂: *a*, ocular tubercle; *b*, femur of palp from below; *c*, from outer side; *d*, genital operculum; *e*, chelicera; *f*, segment I of chelicera from above. ♀: *g*, femur of palp below.

springing from shorter papillae and granules; transverse rows of single granules dividing dorsal scute into 4 smooth shiny areas and meeting a wide lateral row of granules on each side, in addition smooth areas behind and at the sides of the ocular tubercle; posterior margin of dorsal scute and free tergites with a row of cylindrical papillae rising from more or less irregularly placed much smaller granules; anterior sternites granular in anterior half, smooth in posterior half, last two sternites granular throughout; coxae strongly rugose, coxa I and the portions of remaining coxae bordering on the sternum with conical seta-tipped granules; genital operculum as in fig. 47, *d*, armed



anteriorly with 6 cylindrical papillae tipped with setae. Pedipalp strongly rugose above and at the sides, smooth and shiny below; trochanter with 2 stout teeth below; femur seen from below (fig. 47, *b*) with 1 very large tooth arising at about the middle from the smooth area and directed slightly inwards (seen from outer side, fig. 47, *c*), proximally to this tooth a row of 5–6 minute granules in the middle; outer side with a row of 3 moderate teeth in proximal half, inner side with 3–4 small teeth, dorsally 2–3 indistinct larger granules; patella unarmed, tibia unarmed except for 1–2 small teeth apically on the inner side, tarsus with a stout triangular tooth at its inner base and 1 or 2 small teeth distal to it; chelicera seen from above with 2 long teeth at the apex of segment I (fig. 47, *f*), behind these a roughly granular area, seen from the side (fig. 47, *e*), segment II with a row of pointed granules on its anterior surface; legs all rugose except tarsi and metatarsi, femur I not armed with spines below but with 6 tooth-like granules above and 1–2 very small seta-tipped papillae in proximal half below; tarsal segments 4 : 10 : 4 : 4.

*Measurements*.—Length of body 6·3, breadth 4, pedipalps 8·2 mm.

♀. *Colour* as in ♂, tarsus of pedipalp yellow throughout; armature of dorsum of body as in ♂ except that the papilliform granules are not as large and conspicuous. Pedipalp: trochanter with 2 teeth below and a small one between them, femur below as in fig. 47, *g*; tibia granular below with about 4 enlarged granules on each side, tarsus with 3 triangular teeth on each side below. Chelicera: segment I without enlarged teeth at dorsal apex but provided above in apical half with a dense patch of papilliform granules, the anterior ones projecting forwards beyond the anterior edge of the segment, segment II as in ♂; legs as in ♂; tarsal segments 4 : 8–9 : 4 : 4.

*Measurements*.—Length of body 5, breadth 4, pedipalps 4·8 mm.

Types, 4 ♂♂, 3 ♀♀, Mfongosi, Zululand. Other localities: 1 ♂, Inchanga, Natal.

Gen. ADAEUM Karsch.

1880. Karsch, Zeit. Naturw., liii, p. 403.

1923. Roewer, Die Weberknechte der Erde, p. 620.

Sternum narrowly triangular (fig. 50, *b*); tarsus I with 3 segments, II with more than 6, III and IV with 4 each; terminal section of tarsus I consisting of 2 segments, II consisting of 3 segments; secondary sexual characters of ♂ present in pedipalp which is larger and more strongly armed than in ♀.

Seven species, Cape Province.



## Key to species.

1. Dorsal scute divided by transverse and longitudinal rows of granules into smooth lateral areas (figs. 49, *a* ; 50, *a*) . . . . . 2.  
     Dorsal scute densely and uniformly granular, sometimes with median but with no lateral areas (figs. 52, *a* ; 53, *a*) . . . . . 4.
2. Patella of pedipalp without teeth . . . . . *asperatum*, p. 436.  
     Patella of pedipalp with teeth . . . . . 3.
3. Anterior margin of carapace with an irregular row of small more or less equal-sized teeth (fig. 49, *a*) . . . . . *obtectum*, p. 437.  
     Anterior margin of carapace with larger but fewer teeth, a group of 3-5 closely contiguous teeth in front of ocular tubercle, the middle one outstanding (fig. 50, *a*) . . . . . *latens*, p. 438.
4. Dorsal scute uniformly granular throughout, without smooth areas (fig. 53, *a*) . . . . . 5.  
     Dorsal scute with 4-5 smooth median areas, anterior margin of carapace with a group of 3-5 closely contiguous teeth in front of ocular tubercle, the middle one outstanding (fig. 52, *a*) . . . . . 6.
5. Anterior margin of carapace beset with teeth of which the middle one is outstanding . . . . . *hewitti*, p. 506.  
     Anterior margin of carapace beset with small equal sized teeth (fig. 53, *a*) . . . . . *squamatum*, p. 442.
6. Claws of chelicerae modified (fig. 52, *f*), patella of pedipalp with 2 normal teeth on inner side (fig. 52, *e*) . . . . . *granulosum*, p. 441.  
     Claws of chelicerae normal (fig. 51, *e*), patella of pedipalp with 1 large crescentic tooth on inner side (figs. 51, *c*, *d*) . . . . . *spatulatum*, p. 439.

*Adaeum asperatum* Karsch.(Text-fig. 48, *a-b*.)

1880. Karsch, Zeit. Naturw., liii, p. 403.

1923. Roewer, Die Weberknechte der Erde, p. 620, fig. 779, *a-b*.

Anterior margin of carapace without a transverse groove, above with 3 small teeth in the middle, otherwise rugose granular; ocular tubercle sloping forwards, unarmed, rising directly from the anterior margin of the carapace, rugose granular; carapace on each side of ocular tubercle rugose granular; dorsal scute with 4 areas divided on each side of the central pairs of tubercles into quadrate fields by rows of small granules; area V and I-III free tergites each with 1 transverse row of enlarged and widely spaced granules; genital operculum rugose granular, bordered anteriorly and at the sides with 8 slender papillae; inferior surfaces of coxae I-IV densely and coarsely granular, a little smoother in the middle; coxa I with 3 teeth along its anterior margin, coxa II with 4 along its posterior distal margin,

coxa IV with 4 along its lateral distal margin. Chelicerae : segment I smooth, segment II rugose granular anteriorly ; pedipalps from inner and outer side as in figs. 48, *a*, *b* ; legs stout, trochanters I-IV granular, I with 1 ventral tooth in addition ; femora I and II with 4 small ventral spines ; calcaneus of legs I-IV apically swollen and short ;



FIG. 48.—*Adaeum asperatum*. *a*, palp from inner side ; *b*, palp from outer side (copied from Roewer).

tarsal segments 3 : 10 : 4 : 4. Colour of body a dirty reddish brown, appendages a little lighter.

*Measurements*.—Length of body 6, pedipalps 6, legs 6·5 : 9 : 7 : 9.

South Africa, locality according to Pocock probably Port Elizabeth.

Type, 1 (♂ ?), in Berlin Museum. The figure given by Roewer represents in all probability a ♀.

*Adaeum obtectum* Loman.

(Text-fig. 49, *a-e*.)

1898. Loman, Zool. Jahrb. Syst., ii, p. 525, t. 31, figs. 14-17.

1923. Roewer, Die Weberknechte der Erde, p. 621, fig. 780, *a-e*.

Body in appearance and armature of ocular tubercle, chelicerae, apices of coxae I-IV, and trochanters I-IV as in fig. 49, *a* ; all free sternites and inferior surfaces of coxae I-IV with rugose and dense irregular granulation ; coxa I with 1 anterior row of tubercles ; genital operculum as in fig. 49, *e* ; pedipalp seen from outer and inner sides as in figs. 49, *c*, *d* ; legs stout, trochanter to metatarsus of I-IV with rugose and close granulation ; calcaneus of legs I-IV short and apically swollen ; tarsal segments 3 : 8-10 : 4 : 4. Colour of body and all appendages light reddish brown, the tubercles of scute and tergites I-IV lighter.

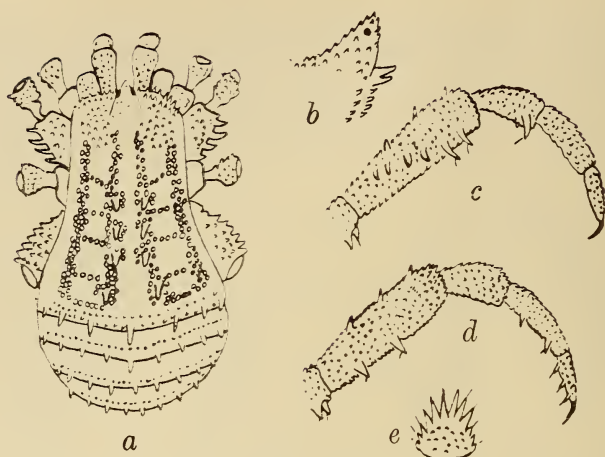


FIG. 49.—*Adaeum obtectum*. *a*, dorsal surface of body; *b*, ocular tubercle; *c*, palp from inner; *d*, from outer side; *e*, genital operculum (copied from Roewer).

*Measurements*.—Length of body 6·5, pedipalps 4, legs 7 : 11 : 8 : 12.

Types, 2 (♂ or ♀ ?), Knysna. Types in Amsterdam Museum.

The figure given by Roewer represents in all probability a ♂.

*Adaeum latens* Loman.

(Text-fig. 50, *a-f*.)

1898. Loman, Zool. Jahrb. Syst., ii, p. 526, t. 31, fig. 11.

1923. Roewer, Die Weberknechte der Erde, p. 621, fig. 781, *a-f*.

Body in appearance and armature of ocular tubercle, chelicerae, apices of coxae I–IV, and trochanters I–IV as in fig. 50, *a*; all free sternites more or less irregularly and coarsely granular; genital operculum as in fig. 50, *d*; inferior surfaces of coxae I–IV with close and irregular coarse granulation, sometimes more sparsely granular in the middle; coxa I with 1 anterior row of 4–5 tubercles; pedipalp seen from inner and outer sides as in figs. 50, *e, f*; legs stout, trochanter to metatarsus of I–IV with close rugose granulation; trochanter I with 1 ventral tooth; femora I and II with each 4 ventral spines; calcaneus of legs I–IV apically swollen; tarsal segments 3 : 8–9 : 4 : 4. Colour of body dorsally darker and ventrally lighter reddish brown; appendages light reddish yellow.

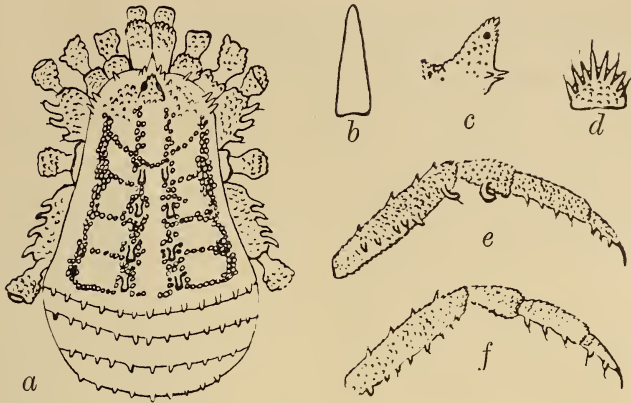


FIG. 50.—*Adaeum latens*. *a*, dorsal surface of body; *b*, sternum; *c*, ocular tubercle; *d*, genital operculum; *e*, palp from inner; *f*, palp from outer side (copied from Roewer).

*Measurements*.—Length of body 4·5, pedipalps 4·5, legs 6 : 9 : 7 : 10. Types, 2 (♂ or ♀ ?), Knysna. Types in Amsterdam Museum. The figure given by Roewer represents in all probability a ♂.

*Adaeum spatulatum* n. sp.

(Text-fig. 51, *a-f*.)

♂. *Colour* light yellow brown.

Carapace with anterior margin armed as in fig. 51, *b*, seen from above, anterior lateral angles of carapace with 3 large teeth; dorsal scute and free tergites with granules arranged as in *granulosum* (cp. fig. 52, *a*); ocular tubercle seen from the side as in fig. 51, *a*, its apex with some large round granules; median granules of areas of dorsal scute larger than in *granulosum*, those behind the ocular tubercle forming 2 parallel rows, transverse rows of granules larger and more distinct than in *granulosum*; area V with a row of large conical granules, the interspaces with small round granules; free tergites in anterior half with a transverse row of large conical granules and some much smaller ones, posterior half matt; sternites with an anterior row of small bead-like granules doubled at the sides, remainder of sternite smooth; cleft between coxa IV and stigma-bearing sternite filled up with numerous round granules; whole of inferior surfaces of coxae except III and IV in the middle covered with granules, coxa I with some larger conical granules along its anterior margin, these increasing in size distally;



genital operculum covered with small round granules, its anterior margin with 9 long seta-tipped papillae.

Pedipalp coarsely granular except on under surfaces of segments; femur seen from outer side as in fig. 51, *c*, from inner side as in fig. 51, *d*; patella with a conspicuous crescentic blade-like tooth on inner side below, femur near inner apex with a similar but smaller tooth; tibia with 2 moderate teeth on inner side near apex and some smaller ones, tarsus with 3 teeth on each side; chelicera seen from outer side as in

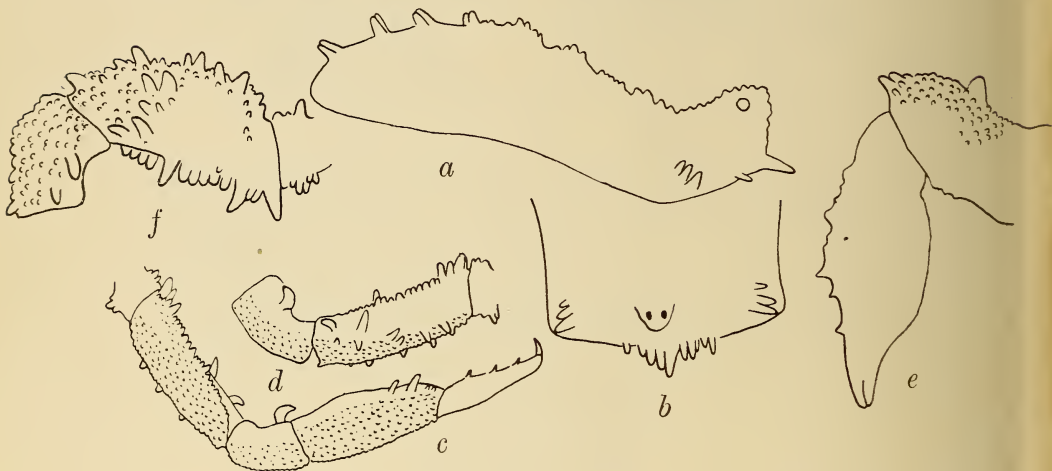


FIG. 51.—*Adaeum spatulatum*. ♂: *a*, body from the side; *b*, anterior part of body from above; *c*, palp; *d*, femur of palp from inner side; *e*, chelicera. ♀: *f*, femur-patella of palp from inner side.

fig. 51, *e*, the fingers of the claw normal, not armed as in *granulosum*; legs unarmed, femur I below near the base with a few granules; tarsal segments 3 : 9 : 4 : 4.

*Measurements*.—Length of body 5, breadth 3·4, pedipalps 3·4 mm.

♀. Granulation of dorsum as in ♂, anterior margin of sternites with a closely contiguous row of small round granules, a well-separated row of minute seta-tipped granules in the middle, posterior to this smooth; genital operculum with 7 papillae along its anterior margin; pedipalp much smaller than in ♂, as in fig. 51, *f*, seen from the inner side, patella without a crescent-shaped tooth but with 2 smaller teeth on inner side; otherwise as in ♂; tarsal segments 3 : 8 : 4 : 4; tarsus II sometimes with 9, occasionally with 7 segments.

*Measurements*.—Length of body 5, breadth 3·7, pedipalps 3·6 mm.

Types, I ♂, 9 ♀♀, George. The ♂ of this species closely resembles that



of *A. latens* Loman, from Knysna, in the armature of the pedipalp; if, however, the figure given by Roewer in *Die Weberknechte der Erde* is correct, the granulation of the dorsal scute in *A. spatulatum* is quite different, there being no trace of smooth lateral quadrate areas (cp. text-fig. 50, a).

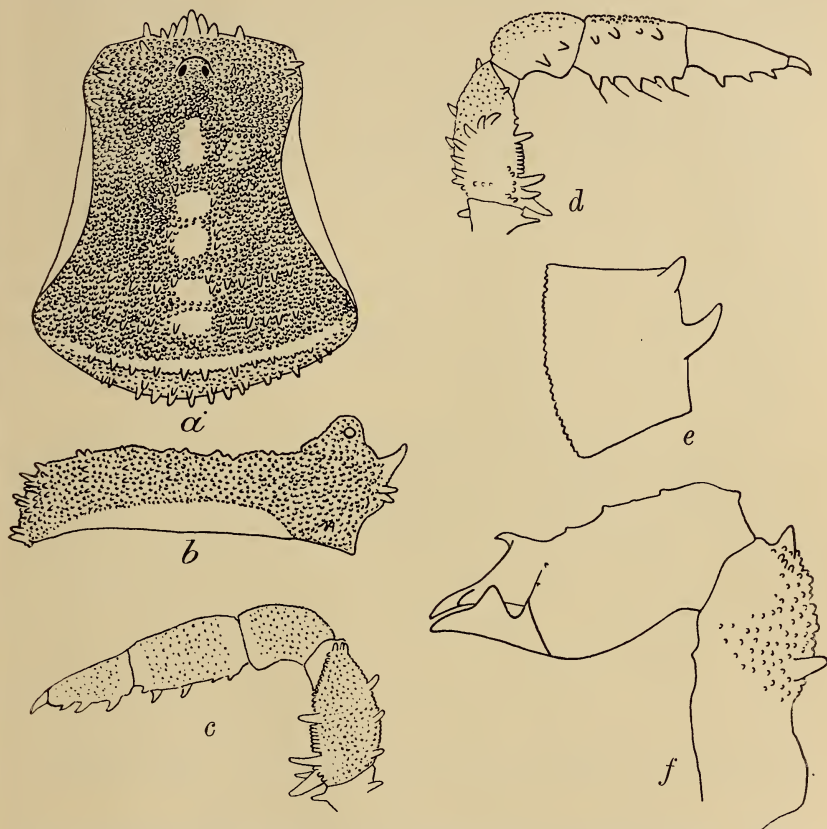


FIG. 52.—*Adaeum granulosum*. ♂: a, dorsal surface; b, body from side; c, palp from outer side; d, from inner side; e, patella of palp from above; f, chelicera.

*Adaeum granulosum* n. sp.

(Text-fig. 52, a-f.)

*Colour* blackish tinged with olive green above, lighter below. Dorsum as in fig. 52, a, uniformly and thickly covered with small round bead-like granules, the sides and some roughly quadrangular spaces in the middle smooth; anterior margin of carapace with about 6 large

contiguous tooth-like granules in front of the ocular tubercle, 2 conical granules at the antero-lateral angles of the carapace; ocular tubercle as in fig. 52, *b*, seen from the side, rounded and low; areas not defined by grooves or rows of enlarged granules except the last two which are represented by fairly regular transverse rows of conical granules; posterior border of dorsal scute and free tergites posteriorly with a row of enlarged conical granules, some smaller bead-like granules between them; sternites with a single row of bead-like granules in anterior half, these dense at the sides but thinning out in the middle, last sternite covered with granules except in the middle; stigma-bearing sternite and the cleft between it and coxa IV filled up with a broad strip of granules, the anterior portion adjacent to the genital operculum (sternite I) smooth; coxae almost smooth in the middle (especially IV) but the clefts forming the junctions with adjacent coxae filled up with bead-like granules; inferior surface of coxa I with granules, its anterior border with about 4 enlarged conical granules; genital operculum with some bead-like granules and about 6 cylindrical papilliform granules anteriorly.

Pedipalp covered with bead-like granules above, smooth below, seen from inner side as in fig. 52, *d*, from outer side as in fig. 52, *c*; patella with 2 distinct slightly curved teeth on inner side, a middle and a subapical one, the middle one the larger; tibia with 3 or 4 teeth on each side; chelicera unusually large and stout, segment I above with a middle and apical conical tooth; segment II with claws peculiarly modified as in fig. 52, *f*; movable finger with a large blunt lobe near its middle, immovable finger with a large sharp tooth near its base. Legs thickly covered with bead-like granules, the granules arranged in longitudinal rows on under surfaces of femora II–IV, a smooth inferior strip in the middle; femur I with 2 conical granules below at its base, 4–5 similar but smaller granules along its inner side; tarsal segments 3:9:4:4.

*Measurements*—Length of body 4, breadth 3·5, pedipalps 5 mm.

Type, 1 ♂, Swartberg Pass, 5000 feet altitude, near Prince Albert, Cape Province.

*Adaeum squamatum* n. sp.

(Text-fig. 53, *a-e*.)

*Colour* of body dark green, appendages lighter.

Anterior margin of carapace with an irregular row of 10–15 teeth varying in size but none especially large (fig. 53, *a*); anterior lateral

angles of carapace with 3 stout teeth, behind these a large tooth projecting outwards beyond the lateral margins of carapace; ocular tubercle seen from the side with several enlarged granules at its apex; granulation of dorsum of body as in fig. 53, *a*, covered with small round granules not forming a pattern, areas represented by a pair (the

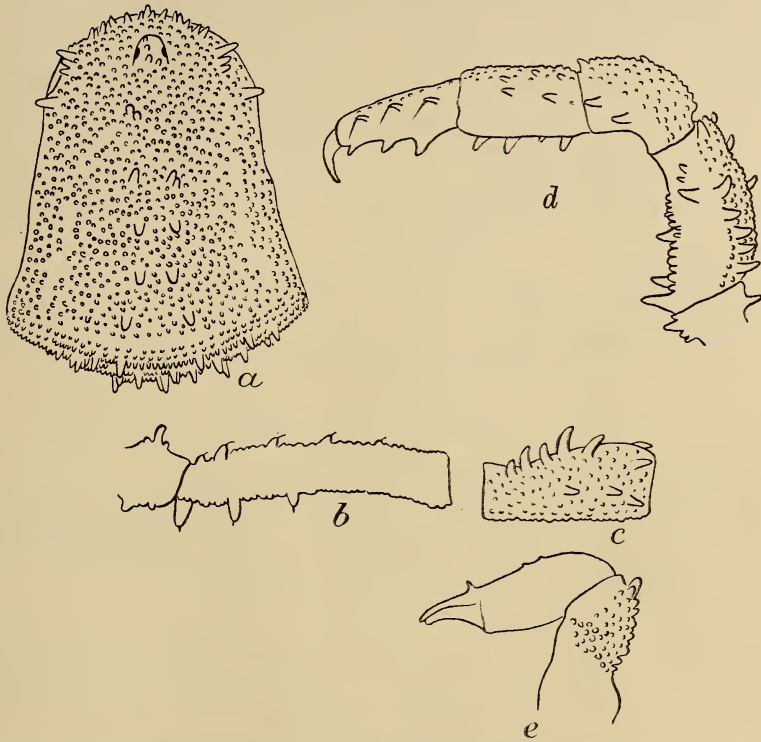


FIG. 53.—*Adaeum squamatum*. *a*, dorsal surface of body; *b*, femur I; *c*, femur of palp above; *d*, palp from inner side; *e*, chelicera.

individuals of these pairs sometimes doubled) of large conical granules in the middle, these quite distinct from the normal smaller granules; area V with about 6 large conical granules and 1 or 2 rows of smaller granules; free tergites with a transverse row consisting of about 8 enlarged conical granules connected by small round granules; sternites with an anterior row of small round closely contiguous granules, a row of well-separated small seta-tipped granules in the middle; inferior surfaces of all coxae granular throughout, a few larger round granules at the bases, coxa I with larger, more conical,

seta-tipped granules especially along its anterior margin; genital operculum with 10 fairly short seta-tipped papillae on its anterior margin, the segment to which it is attached (anterior portion of stigma-bearing sternite) with 2 fairly large round granules, one on each side.

Pedipalp: femur above on inner side near upper surface with a row of 5 conical teeth (fig. 53, *c*), the row curving downwards, 3 teeth on upper surface in distal half; pedipalp seen from inner side as in fig. 53, *d*. Chelicera: upper surface of segment I without a tooth or enlarged granule in the middle, 1 or 2 apical granules present (fig. 53, *e*), granules on the outer side near lower surface flattened and squamiform; immovable finger of segment II with a sharp tooth near its base; legs densely granular, femur I below armed as in fig. 53, *b*; tarsal segments 3: 10-11: 4: 4.

*Measurements*.—Length of body 2.8, pedipalps 2.5 mm.

Type, 1 ♀, Somerville, Eastern Cape Province. Type in Albany Museum, Grahamstown.

#### Gen. METADAEUM Roewer.

1923. Roewer, *Die Weberknechte der Erde*, p. 623.

Sternum narrowly triangular; terminal section of tarsus I with 2 segments, I with 4 segments; tarsus I with 3 segments, II with more than 6 segments, tarsi III and IV with 4 segments.

One species, Eastern Cape Province.

#### *Metadaeum capense* Roewer.

(Text-fig. 54, *a-c*.)

1923. Roewer, *Die Weberknechte der Erde*, p. 623, fig. 783, *a-c*.

Body in appearance and dorsal armature, ocular tubercle, and apices of coxae I-IV as in fig. 54, *a*; all free sternites with 1 transverse row of granules; genital operculum granular, anteriorly with 8 slender papillae; surfaces of coxae I-IV closely and coarsely granular; coxa I with 1 anterior row of tubercles. Chelicerae: segment I dorsally and segment II anteriorly coarsely granular; pedipalp seen from inner and outer sides as in figs. 54, *c*, *b*; legs powerful, I-IV from trochanter to metatarsus with close rugose granulation, calcaneus of legs I-IV short and conical; tarsal segments 3: 9-11: 4: 4; secondary sexual characters of ♂ present on leg I; femur below with 1 basal row of



3 tubercles. Colour of body reddish brown; all the spines and tubercles of the dorsum and appendages a lighter reddish yellow.

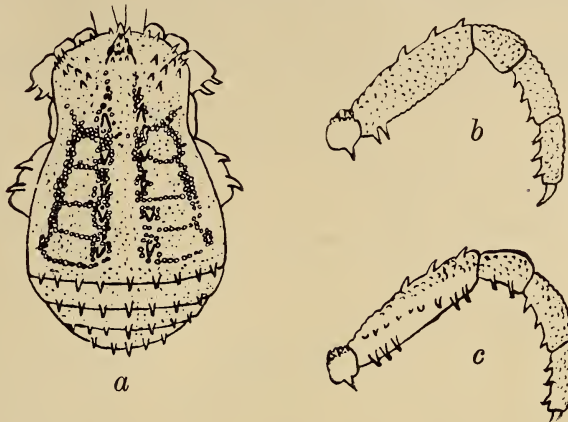


FIG. 54.—*Metadaeum capense*. ♂: *a*, dorsal surface of body; *b*, palp from outer; *c*, from inner side. (Copied from Roewer.)

*Measurements*.—Length of body 6, pedipalps 5; legs I–IV, 7 : 12 : 8 : 13 mm.

Types, 9 (♀♂), Port Elizabeth. Types in Roewer's collection.

This is probably only a species of *Adaeum* and will have to be included therein.

#### Gen. CRYPTADAEUM n. gen.

Most nearly resembling *Adaeulum*; tarsus I with 4 segments, tarsus II with more than 6, its terminal section consisting of 3 segments; sternum broadly triangular as in fig. 56, *d*; ocular tubercle rounded above; dorsal scute divided into median and lateral smooth shiny areas by rows of granules (fig. 55, *a*); femur of leg I armed below with long papillae in both sexes; tarsal segments 4 : 12–14 : 4 : 4; secondary sexual characters of ♂ present in pedipalp.

One species, Western Cape Province.

#### *Cryptadaeum capense* n. sp.

(Text-figs. 55, *a–h*; 56, *a–e*.)

♂. Colour deep brown, almost black.

Anterior margin of carapace with a row of numerous small close-set conical granules; dorsal scute divided into smooth shiny areas by



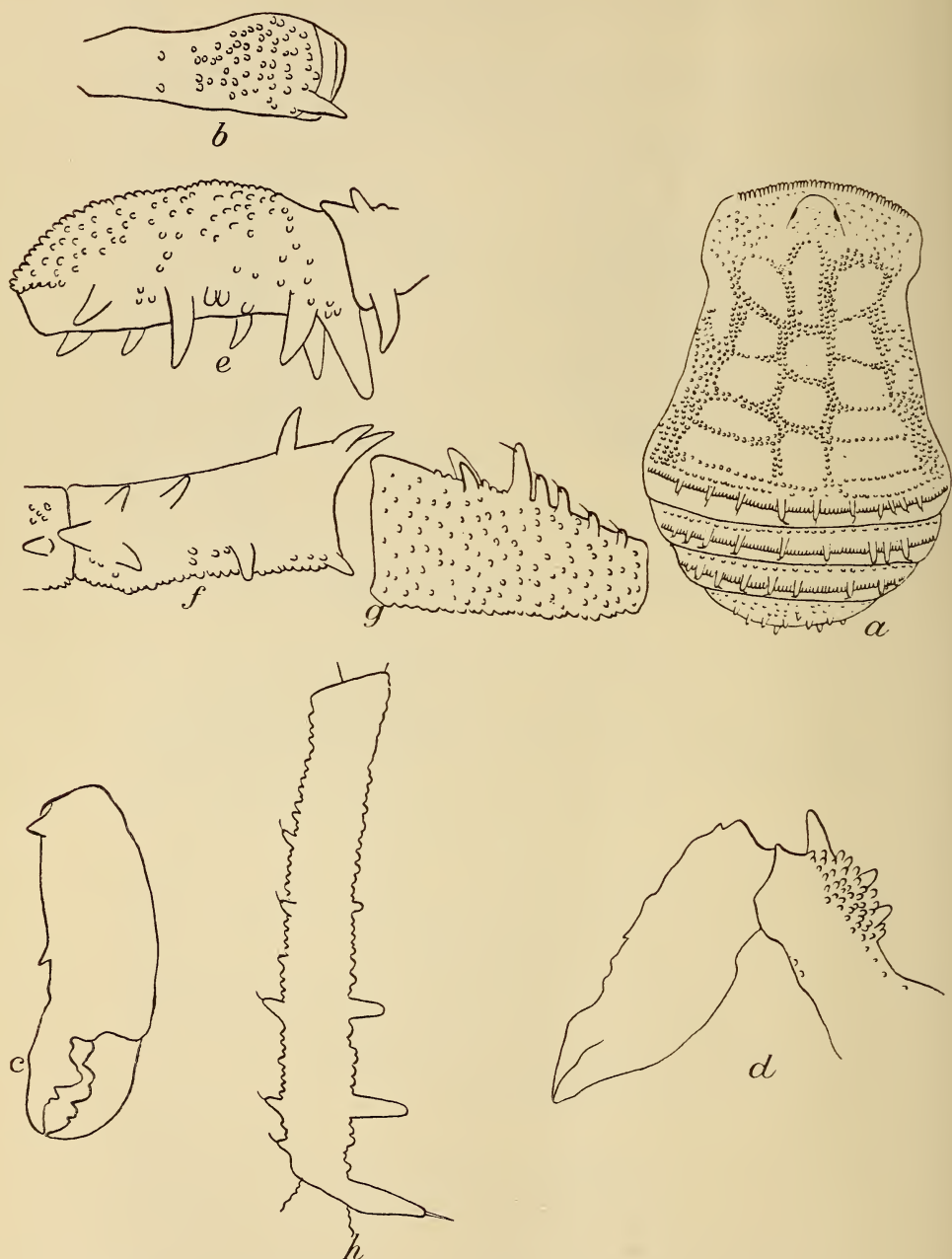


FIG. 55.—*Cryptadaeum capense*. ♂: *a*, dorsal surface of body; *b*, segment I of chelicera above; *c*, from the front; *d*, chelicera from side; *e*, femur of palp from outer side; *f*, from below; *g*, from above; *h*, femur I.

rows of granules arranged as in fig. 55, *a* ; ocular tubercle rounded above, covered with small round granules, seen from the side as in fig. 56, *a* ; posterior margin of dorsal scute with a row of 9–12 long cylindrical seta-tipped granules, the interspaces with a row of much smaller conical granules ; free tergites I and II with an anterior row of

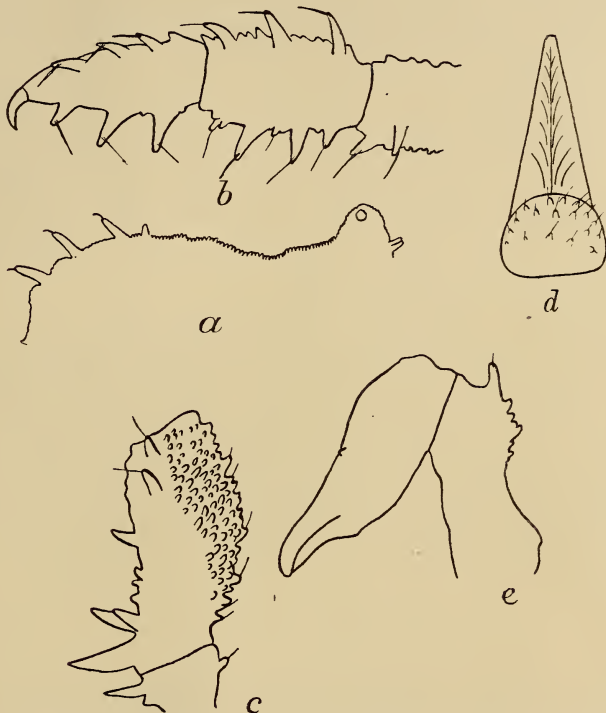


FIG. 56.—*Cryptadaeum capense*. ♀: *a*, body from the side; *b*, patella-tarsus of palp below; *c*, femur of palp from inner side; *d*, sternum; *e*, chelicera.

small rounded granules, in the middle a row of long cylindrical seta-tipped granules and immediately behind these a row of small conical granules (fig. 55, *a*), sternites with fine granulation in their anterior half or third, the rest smooth ; coxae set wide apart from their opposite partners, uniformly and fairly densely granular, this granulation more dense at their distal extremities and in the grooves defining the coxae, the granules at the bases of the coxae bordering on the sternum not enlarged ; coxa I with an anterior row of enlarged conical granules ; genital operculum with small round seta-tipped granules but no cylindrical papillae (fig. 56, *d*). Pedipalp : trochanter and femur

seen from below as in fig. 55, *f*, trochanter below with 1 large conical tooth; femur below with 3 large conical teeth at its base, in addition to these 3 teeth on the inner side, 2 on the outer side; femur seen from the outer side as in fig. 55, *e*, inner surface of femur with 5 moderate teeth increasing in size distally (fig. 55, *g*), seen from above; whole of pedipalp closely granular above, tibia granular below, tarsus shiny and smooth below; patella below with 2 teeth on inner side, 0 on outer side, tibia below with 3 teeth on outer side, inner side with 3 teeth and in addition some small intermediate teeth, tarsus below with 3 teeth on each side. Chelicera: segment I with a granular area near its upper apex including a large tooth (fig. 55, *b*) seen from above, (fig. 55, *d*) seen from the side; segment II shiny, its anterior surface with a few sharp teeth (fig. 55, *c*) seen from in front. Legs: femur I below with 3 basal papillae (fig. 55, *h*); tarsal segments 4:12:4:4.

*Measurements*.—Pedipalps 5·2, length of body 5 mm.

♀. *Colour* and granulation as in ♂; pedipalp femur as in fig. 56, *c*, seen from inner side; patella, tibia, and tarsus as in fig. 56, *b*, seen from below; chelicera as in fig. 56, *e*; femur of leg I as in ♂; tarsal segments 4:14:4:4; the ♀♀ can be distinguished from the ♂♂ by the teeth of the pedipalps which are smaller in the ♀ than in the ♂, while the pedipalps themselves are smaller in proportion to the body length.

*Measurements*.—Pedipalps 3·5, length of body 4·8 mm.

Types, 4 ♂♂, 10 ♀♀, 2 juveniles, St James, Cape Peninsula.

#### Gen. MICRADAENUM n. gen.

Dorsal scute with 2 longitudinal rows of enlarged granules in the middle extending from ocular tubercle to almost the posterior margin of dorsal scute; sternum triangular; pedipalps very rugose but without any teeth or spines; tarsus I with 3, tarsus II with 4 segments; terminal section of tarsus I consisting of 2 segments, II consisting of 2 segments; tarsal segments of legs 3:4:4:4; body size small.

One species, Western Cape Province.

#### *Micradaenum rugosum* n. sp.

(Text-fig. 57, *a-e*.)

*Colour* varying from brown to blackish, under surface lighter, metatarsi and tarsi of legs yellow; granulation of body not distinct and very coarse; anterior margin of carapace with a row of con-

tiguous granules, a group of 2 larger ones at the antero-lateral angles of the carapace; ocular tubercle as in fig. 57, *a*, seen in profile hardly rising above the level of the dorsal scute; dorsal scute and carapace with 2 continuous longitudinal rows of enlarged granules in the middle extending from ocular tubercle almost to posterior margin of scute; on each side some transverse rows of similar enlarged granules meeting the central rows and forming indistinct areas which are filled up with

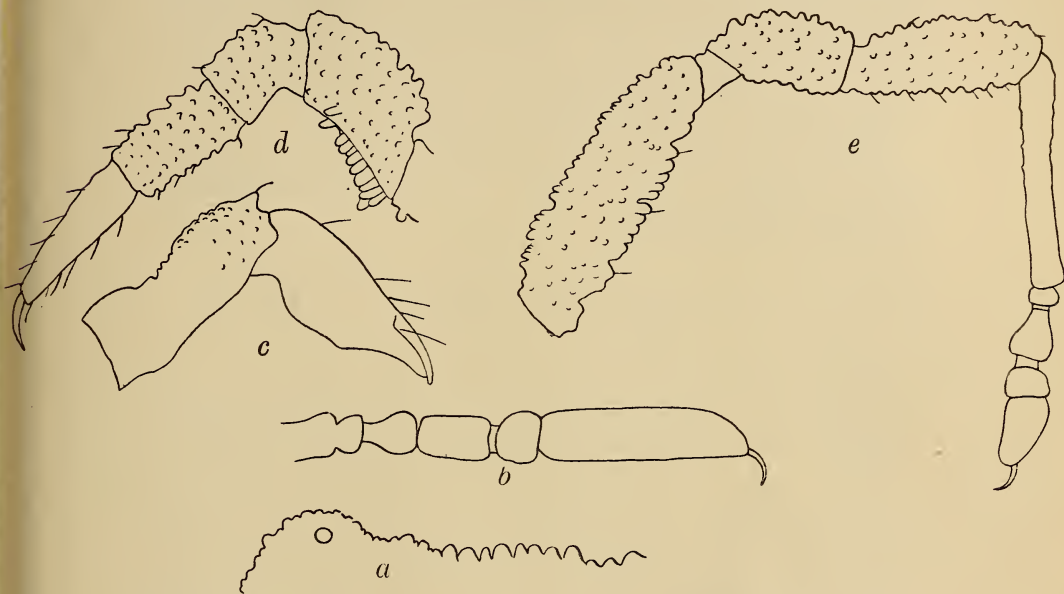


FIG. 57.—*Micradaeum rugosum*. *a*, ocular tubercle; *b*, tarsus II; *c*, chelicera; *d*, palp from outer side; *e*, leg I.

small particles of grit and sand; posterior margin of dorsal scute with a ridge of larger granules interrupted in the middle; free tergites covered with irregular coarse round granules, a ridge of larger granules interrupted in the middle forming their posterior margins; sternites in anterior half with round, coarse, close-set granules, in posterior half smooth; coxae uniformly and densely covered with more or less equal-sized granules, coxa I distinctly separate from remaining coxae which are fused and possess no grooves defining them; genital operculum with 7-8 seta-tipped papillae at its anterior margin and sides, remainder of its surface with smaller conical granules; sternum triangular, not so slender as in *Adaeulum*. Pedipalp as in fig. 57, *d*, all segments except tarsus strongly rugose above and at the sides, smooth or with

a few small granules below, without individual spines or teeth; femur below on outer side with a crest composed of 9-12 closely contiguous granules; remaining segments as in fig. 57, *d*, tarsus more or less smooth, armed with a few stout setae; chelicera as in fig. 57, *c*; leg I as in fig. 57, *e*, femur, patella, and tibia thickly covered with round granules; seen from below these granules are disposed in regular longitudinal rows, from above they are more or less irregular; metatarsus with a few granules and fairly numerous setae, tarsal segments smooth with numerous setae; remaining legs similar in granulation to leg I, tarsal segments of leg II as in fig. 57, *b*; lateral prongs of claws of tarsi III and IV minute; tarsal segments 3:4:4:4.

*Measurements*.—Length of body 3.5, pedipalps 2 mm.

Type, I specimen (♂ or ♀?), Table Mountain slopes, Cape Town. Other specimens from Platteklip, Chapman's Peak, Newlands, Wynberg, Table Mountain.

#### Gen. LARIFUGA Loman.

1898. *Larifuga*, Loman, Zool. Jahrb. Syst., ii, p. 527.

1903. „ Pocock, Proc. Zool. Soc. London (1902), pt. 2, p. 402.

1914. „ Roewer, Arch. Naturg., lxxx, A, fasc. 12, p. 150.

1923. „ Roewer, Die Weberknechte der Erde, p. 623.

Dorsal scute with fine granulation either uniformly disposed or forming transverse rows dividing it into 4 areas; ocular tubercle either with a single apical spine or with several, but not rounded; areas with a pair of conical granules in the middle; free tergites with 2 rows of granules, the one consisting of minute, the other of enlarged conical granules; femur of pedipalp below with large stout teeth; chelicerae armed with a variable number of teeth at the dorsal apex of segment I; sternum roughly pentagonal; tarsi I, III, and IV consisting of 4 segments, II of 15-21 segments; terminal section of tarsus I with 2, tarsus II with 3 segments; calcaneus of metatarsus in all legs much shorter than astragalus; femur of leg I inferiorly armed both in ♀ and ♂. Secondary sexual characters of ♂: teeth on ventral surface of pedipalp femur much larger than in ♀ (*L. weberi* excepted); genital operculum longer than or as long as broad, in ♀ much broader than long; teeth at the dorsal apex of segment I of chelicerae longer than in the ♀; basal segment of tarsus I a little thickened, normal in ♀. Six species, Western Cape Province.



## Key to species.

1. Dorsal scute divided into 4 definite smooth areas by distinct transverse rows of granules . . . . . 2.  
Dorsal scute not divided into definite smooth areas by distinct transverse rows of granules, or uniformly granular throughout . . . . . 3.
2. Femur of pedipalp of ♂ armed at inner distal apex with a long stout spur-like tooth (fig. 60, b) . . . . . *calcarata*, p. 456.  
Femur of pedipalp of ♂ without such a tooth . . . . . *weberi*, p. 461.
3. Segment I of chelicerae of ♂ with a stout tooth at its dorsal distal apex, as large as, or not much smaller than the large ventral teeth on pedipalp femur . . . . . 4.  
Segment I of chelicerae of ♂ with 1 or more teeth at its dorsal distal apex much smaller than the large ventral teeth on femur of pedipalp . . . . . 5.
4. Anterior surface of segment II of chelicerae shiny or with a few scattered granules, tibia of ♂ pedipalp spined (fig. 58, c) . . . . . *dentifer*, p. 451.  
Anterior surface of segment II of chelicerae closely granular, tibia of ♂ pedipalp unspined (fig. 59, b) . . . . . *granulosa*, p. 453.
5. Posterior margin of dorsal scute with either only 1 conical granule in the middle or this granule distinctly larger than the others of the row, dorsal scute with irregular transverse rows of granules . . . . . *capensis*, p. 457.  
Conical granules on the posterior margin of dorsal scute equal sized, dorsal scute uniformly granular without traces of transverse rows of granules . . . . . *montana*, p. 459.

The characters given for *L. rugosa* Guérin are too indefinite to include it in this key. It is also difficult to give a key for females alone as all of them reveal a good deal of similarity.

*Larifuga dentifer* n. sp.

(Text-fig. 58, a-j.)

♂. *Colour* olive brown, legs, chelicerae, and pedipalps with reticulate olivaceous markings; carapace and dorsal scute covered more or less irregularly with fine bead-like granules not forming smooth areas in the middle of the dorsal scute and more close set at the sides; ocular tubercle as in fig. 58, a, seen from the side; dorsal scute with a pair of stout conical granules in the middle of area IV, these absent in areas I-III where they are represented by obsolete granules placed nearer to each other than those of area IV; posterior margin of dorsal scute (area V) with a transverse row of 5 stout conical granules, I and II free tergites with transverse rows of approximately 11-13 similar granules, III free tergite with a rather irregular row varying in size; sternites finely shagreened, each in the middle with a transverse row of small round granules, these granules widely spaced; inferior surface of coxa I thickly covered with conical seta-tipped

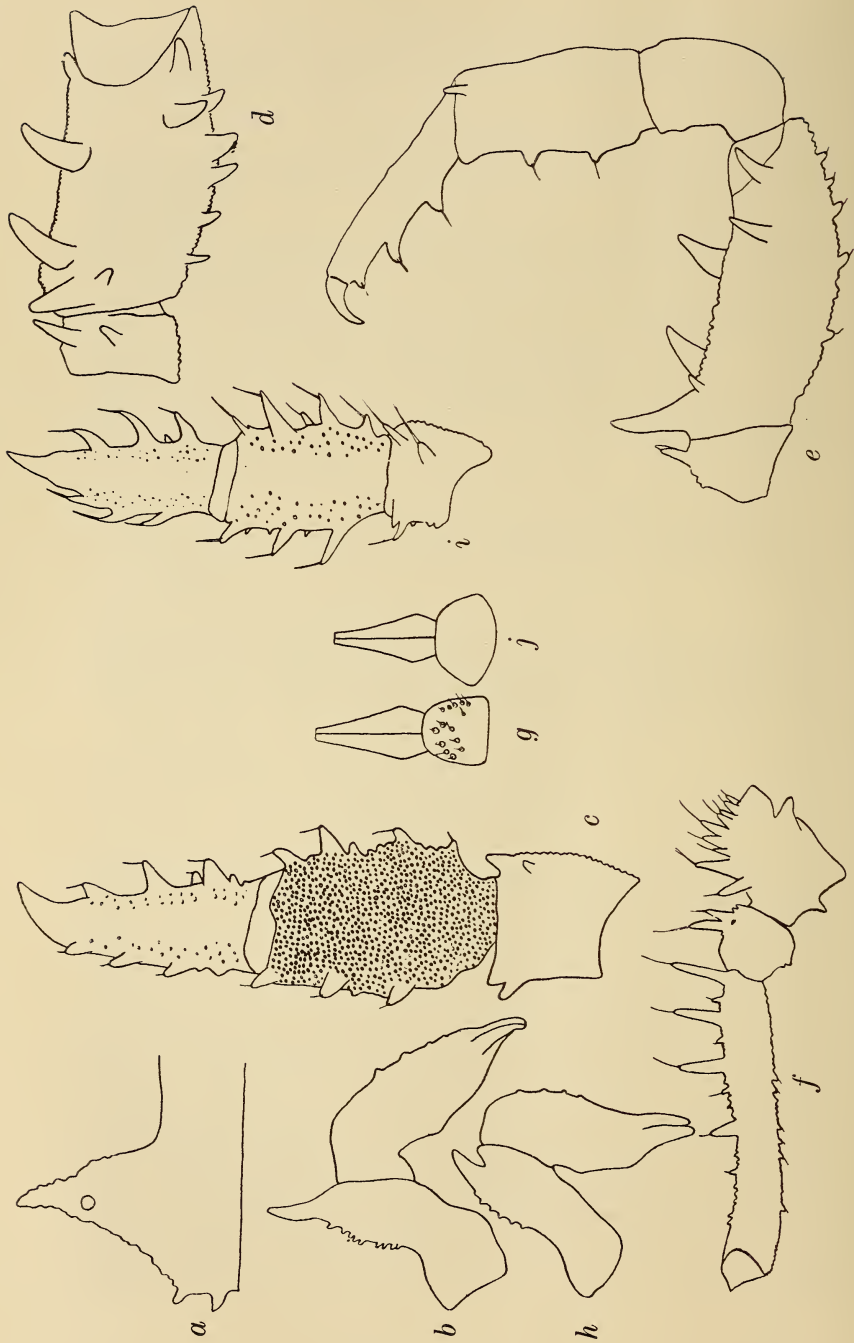


FIG. 58.—*Lariifuga dentifer*. ♂: *a*, ocular tubercle; *b*, chelicera; *c*, patella-tarsus of palp below; *d*, femur of palp from below; *e*, palp from inner side; *f*, sternum. ♀: *g*, sternum. ♂: *h*, chelicera; *i*, patella-tarsus of palp below; *j*, sternum.

granules becoming longer and stouter towards the distal apex, coxae II and III fairly thickly, IV sparsely covered with round granules; posterior distal margin of II with 3-4 long conical granules, anterior distal margin of IV with 1 long and 2-3 shorter granules; posterior margin of IV near the sides with some small granules bridging the cleft between it and the stigma-bearing sternite to meet some similar granules on the anterior surface of the latter. Pedipalp seen from the inner side as in fig. 58, *e*, seen from below (figs. 58, *c*, *d*); trochanter with 2 ventral teeth; femur below on the outer side with 2 large teeth at its base, a small one between them situated more mesially, 1 large middle one and a small apical one; inner side with 2 large teeth near the apex and 5 irregularly placed smaller ones; patella below with a moderate apical tooth at each side, in addition a small tooth in the middle on the inner side; both tibia and tarsus with 3 teeth on each side; whole of ventral surface of tibia evenly covered with small round granules, tarsus with these granules only at the sides; chelicera as in fig. 58, *b*, seen from the side, segment I with a long stout tooth above at its apex, upper surface granular, the sides finely and closely granular, segment II anteriorly smooth except for a few indistinct granules; leg I with femur armed below as in fig. 58, *f*, tibia without conical spines, with a few weak setae; femora of remaining legs unarmed; genital operculum and sternum as in fig. 58, *g*, the former longer than wide, provided with a few spines arising from small spherical granules; tarsal segments 4:17:4:4.

*Measurements*.—Length of body 5·9, breadth 4·3, pedipalps 8 mm.

♀. *Colouring* as in ♂; pedipalps much smaller in proportion to body than in ♂; spination of body as in ♂. Pedipalps: trochanter with 1 small spine; femur armed as in ♂, the teeth smaller; patella as in ♂, the teeth larger; tibia and tarsus as in fig. 58, *i*, seen from below, tibia with 3 main teeth on each side larger and sharper than in ♂, with coarse granules at the sides below; sternum and genital operculum as in fig. 58, *j*; femur I armed below as in ♂; chelicera as in ♂, the tooth at the apex of segment I much shorter (fig. 58, *h*).

*Measurements*.—Length of body 5·3, breadth 4·4, pedipalps 6·2 mm.

Types, 3 ♂♂, 3 ♀♀, River Zonder End, Caledon, Cape Province.

*Larifuga granulosa* n. sp.

(Text-fig. 59, *a-g*.)

♂. *Colour* a rich deep brown, the distal segments of legs olivaceous; anterior upper margin of carapace with a transverse row of about

10 small granules; ocular tubercle seen in profile as in fig. 59, *a*; dorsal scute with uniformly placed small fine granules not defining definite areas as, *e.g.*, in *L. weberi* Loman, see Roewer's Weberknechte



FIG. 59.—*Larifuga granulosa*. ♂: *a*, ocular tubercle; *b*, palp from outer side; *c*, femur of palp below; *d*, patella-tarsus of palp below; *e*, chelicera; *f*, femur I. ♀: *g*, chelicera.

der Erde, p. 624, text-fig. 784, *a*; dorsal scute in the middle with 4 moderate pairs of enlarged granules subequal in size, the first (anterior) pair a little smaller; posterior margin of dorsal scute with a transverse row of conical granules, these smaller than in *L. dentifer*; free tergites I and II with an anterior marginal row of minute granules, their posterior margins with a row of about 10 conical granules, the interspaces of these filled up with minute granules, III free tergite

covered with minute granules, a transverse row of conical granules in the middle; sternites with 2 rows of small round granules, an anterior marginal row which is close set and a row situated a little anterior to the middle consisting of a few widely but regularly spaced granules, last sternite uniformly covered with small granules; inferior surface of coxa I densely granular, 2 conical tooth-like granules at its distal anterior margin much larger than any of the others, coxae II-IV sparsely granular, the cleft between coxa IV and the stigma-bearing sternite filled up with numerous small round granules. Pedipalp seen from the outer side as in fig. 59, *b*, from below as in fig. 59, *c*; trochanter below with 2 teeth; femur below with a group of 3 large teeth basally arranged in the form of a triangle; distally to these on the inner side 3 teeth, the apical one small, on the outer side 2 teeth; a row of 4 intero-dorsal teeth (3 of them can be seen in fig. 59, *c*) and 4-5 small teeth dorsally; patella unarmed, tibia with 1 small tooth at inner apex, tarsus with 2-3 inconspicuous teeth flanking the inner edge (fig. 59, *d*); all segments of pedipalp above and below closely and evenly covered with small round granules; chelicera as in fig. 59, *e*, differing from *L. dentifer* in having the anterior surface and sides of segment II regularly granular and with a stout tooth at the base of the fingers of the claw on the inner side; neither the femur of leg I nor of remaining legs armed inferiorly with long conical spines as in *L. dentifer* (fig. 59, *f*); tarsal segments 4:21:4:4.

*Measurements*.—Length of body 7.6, breadth 4.9, pedipalps 7.5 mm.

♀. As in ♂ but differing in the spination of the pedipalp and chelicerae; trochanter below with 1 large and 1 small tooth; femur below with 2 large teeth at the base, the third inner one being reduced, in addition 1 middle and 1 apical tooth on the inner side, 2 apical teeth on the outer side, 4 intero-dorsal teeth; patella, tibia, and tarsus armed similarly to those of the ♀ of *L. dentifer* (fig. 58, *i*); chelicera as in fig. 59, *g*, the anterior surface of segment II with scattered granules, smooth in places; the armature of segments I and II less pronounced than in the ♂; femur of leg I as in ♂; genital operculum broader than long (in the ♂ it is longer than broad).

*Measurements*.—Length of body 7.3, breadth 4.8, pedipalps 6.1 mm.

Types, 12 ♂♂, 8 ♀♀, River Zonder End, Caledon, Cape Province. Other localities: 2 ♂♂, 7 ♀♀, Bredasdorp; 3 ♂♂, 9 ♀♀, Houw Hoek, Caledon; 5 ♀♀, 1 ♂, Caledon; 1 ♂, Elim, Bredasdorp.



*Larifuga calcarata* n. sp.

(Text-fig. 60, a-j.)

♂. *Colour* brown to black, pedipalps brown, distal segments of leg IV light brown; anterior upper margin of carapace with a transverse row of about 12 strong tooth-like granules; ocular tubercle seen in profile strongly armed with sharp tooth-like granules, not ending in a single pointed spine (fig. 60, a); dorsal scute divided into



FIG. 60.—*Larifuga calcarata*. ♂: a, ocular tubercle; b, femur of palp below; c, patella-tarsus of palp below; d, chelicera; e, femur I; f, tarsus I. ♀: g, femur of palp below; h, patella-tarsus of palp below; i, chelicera; j, ocular tubercle.

4 distinct smooth areas by transverse rows of minute granules; these areas each with a pair of small tubercles in the middle with clusters of minute granules between or around them; the sides of the dorsal scute also with aggregations of minute granules; posterior margin of dorsal scute with a transverse row of enlarged granules, their interspaces filled up with minute granules; free tergites I and II with an anterior bordering row of minute granules and posterior to this a row of enlarged conical granules, III free tergite more or less covered with minute granules, a row of conical granules in the middle; sternites with an anterior close-set and a middle widely separated

row of small round granules; inferior surface of coxa I covered with round granules arranged in 2 rows running parallel to its longitudinal axis, coxae II–IV with some scattered similar granules, cleft between coxa IV and stigma-bearing sternite filled up with small round granules. Pedipalp seen from below (fig. 60, *b*); trochanter below with 2 teeth, the outer larger than the inner one; femur below with 2 large teeth at its base, on the outer side a middle and an apical tooth, the apical larger than the middle one, inner side with 1 very large spur-like tooth at the apex (its length about  $\frac{2}{3}$  the length of femur below), 1–2 intero-dorsal teeth, 3 small blunt dorsal teeth; patella, tibia, and tarsus spined as in fig. 60, *c*, seen from below, on the left pedipalp there are 1 or 2 small teeth on the outer side of tibia in addition to those shown in the figure; pedipalp weakly granular, tibia ventrally more strongly so; chelicera as in fig. 60, *d*, 3–4 small teeth at apex of segment I (only 1 seen in the figure from the side), teeth small but not granular, segment shagreened at the sides, segment II with 2 little teeth anteriorly in the middle. Leg I with femur as in fig. 60, *e*, tarsal segments as in fig. 60, *f*; tarsal segments 4 : 21 : 4 : 4.

*Measurements*.—Length of body 4·5, breadth 3·8, pedipalps 5·7 mm.

♀. As in description of ♂, the tooth-like granules of the anterior margin of carapace smaller; ocular tubercle as in fig. 60, *j*; pedipalp armed as in figs. 60, *g*, *h*, above rugose, below shiny or with some round granules at the sides, femur dorsally with 3–4 granules, trochanter with 1 large tooth below; chelicera with segment II smooth (fig. 60, *i*); leg I with femur armed as in ♂; tarsal segments 4 : 17 : 4 : 4.

*Measurements*.—Length of body 6, breadth 4, pedipalps 4·3 mm.

Types, 1 ♂, 4 ♀♀, Humansdorp, Cape Province.

*Larifuga capensis* n. sp.

(Text-fig. 61, *a–g*.)

♂. *Colour* black, centre of dorsal scute, eye tubercle and a patch on each side of the latter light brown, legs black, light brown at the joints, pedipalp with femur blackish, below brown, remaining segments blackish, the joints light brown, the large basal teeth of the femur blackish; upper anterior margin of carapace armed with a row of 11–13 conical granules; dorsal scute divided into areas by transverse rows of minute granules but not distinctly so, the rows broken and irregular; ocular tubercle seen in profile as in fig. 61, *e*;

areas of dorsal scute with 4 median pairs of enlarged granules, the fourth pair the largest, the other 3 pairs considerably smaller and subequal, around and between these granules aggregations of granules ; posterior margin of dorsal scute with 2 enlarged conical granules in the middle, free tergites with an anterior row of minute granules and a

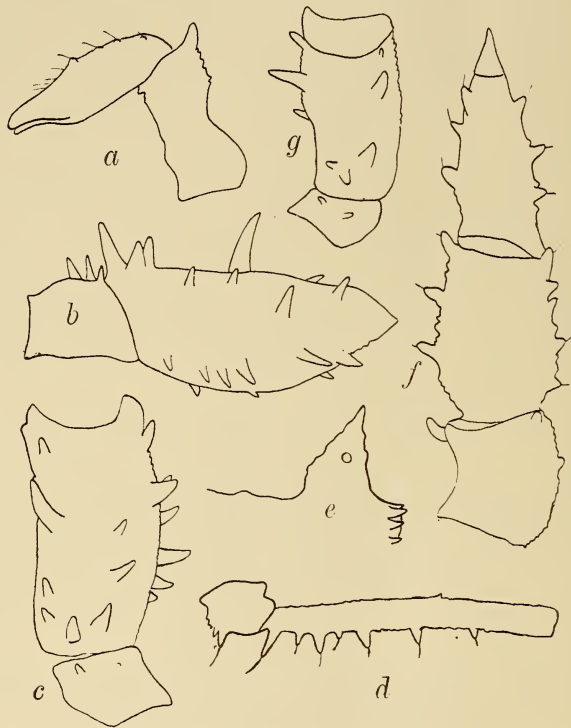


FIG. 61.—*Larifuga capensis*. ♂: *a*, chelicera; *b*, femur of palp from inner side; *c*, from below; *d*, femur I; *e*, ocular tubercle; *f*, patella-tarsus of palp below. ♀: *g*, femur of palp below.

middle row of enlarged conical granules, their interspaces filled up with minute granules, those of III rather irregular; sternites finely shagreened with an anterior bordering row of minute round granules, a row of larger granules in the middle (4–6 times as large as the granules of the anterior row); inferior surface of coxa I covered with round granules growing successively longer and more conical distally, 3–4 near distal anterior apex much longer than the rest, coxae II–IV with smaller and more scattered granules, coxa IV with very few and small granules bridging the cleft between it and the stigma-bearing sternite.

Pedipalp seen from below as in fig. 61, *c*; trochanter sometimes with 1, usually with 2 teeth below, the outer the largest, the inner the smallest; femur below with 3 basal teeth, besides these a middle and an apical tooth on the outer side, the apical one small; on the inner side 2 moderate teeth near the large basal ones and 2 large teeth near apex, the latter situated a little nearer the dorsal surface than the former; 6 large intero-dorsal teeth arranged in a rough  $\Lambda$  (fig. 61, *b*), 3 small dorsal teeth; remaining segments spined as in fig. 61, *f*; chelicera with segment I granular above with a moderate tooth at its dorsal apex, segment II shiny and smooth except for a row of denticles provided with setae (fig. 61, *a*); leg I with femur armed as in fig. 61, *d*; tarsal segments 4 : 17 : 4 : 4.

*Measurements*.—Length of body 5, breadth 3·6, pedipalps 7 mm.

♀. *Colour* black, only the enlarged granules and posterior margins of the free tergites yellow brown, appendages variegated as in ♂; dorsal scute more densely granular than in the ♂, the areas much less distinctly defined, ocular tubercle as in ♂; posterior margin of dorsal scute with a row of about 6 conical granules. Pedipalp seen from below as in fig. 61, *g*, trochanter below with 2 small equal-sized teeth, femur with 2 large and 2 small intero-dorsal teeth and 3 small dorsal granules; remaining segments as in the ♀ of *L. calcarata*; chelicera with the tooth at the dorsal apex of segment I a little shorter than in the ♂; femur of leg I as in ♂; tarsal segments I, 4; II, ?; III, 4; IV, ?.

*Measurements*.—Length of body 5·7, breadth 4, pedipalps 5·5 mm.

Types, 1 ♂, 1 ♀, Chapman's Peak, Cape Peninsula. Other localities: Table Mountain above Klassenbosch, Newlands, Wynberg, Platteklip Ravine, all Cape Peninsula.

*Larifuga montana* n. sp.

(Text-fig. 62, *a-g*.)

♂. Anterior upper margin of carapace with a transverse row of about 10 tooth-like granules, 2 at the antero-lateral angle of the carapace, the distal one the larger; ocular tubercle seen in profile as in fig. 62, *a*, with a tooth-like granule on each side posteriorly; dorsal scute with fairly densely and uniformly distributed small granules not dividing it into areas by means of transverse rows, with 4 equal-sized pairs of enlarged granules; posterior margin of dorsal scute with a transverse row of 8 conical granules; free tergites with 1 anterior row of minute granules and a posterior row of enlarged conical granules, the interspaces filled up with minute granules, the

anterior row of minute granules doubled in tergites II and III; sternites with a close-set anterior marginal row of small granules and a middle row of equal-sized but more widely separated granules; inferior surface of coxa I covered with conical granules increasing in size distally, the 2 distal granules along the anterior margin distinctly larger than the others, coxa II sparsely covered with round granules,

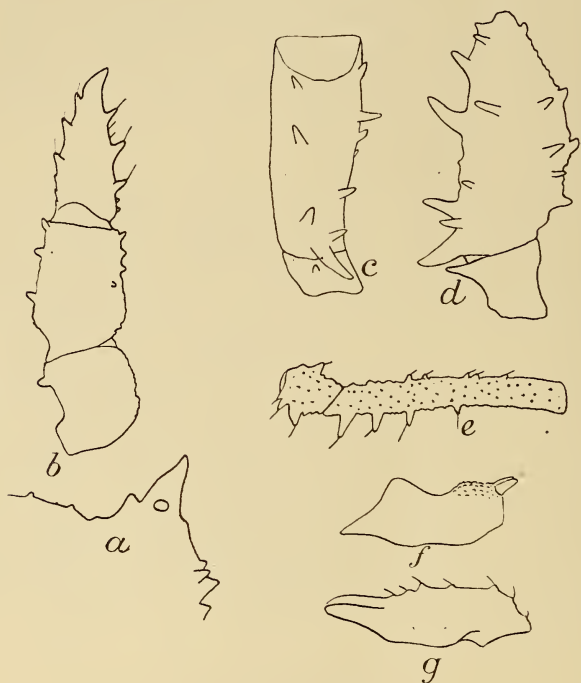


FIG. 62.—*Larifuga montana*. ♂: *a*, ocular tubercle; *b*, patella-tarsus of palp below; *c*, femur of palp below; *d*, from inner side; *e*, femur I; *f*, segment I; *g*, segment II of chelicera.

III and IV with a few scattered granules, cleft between coxa IV and stigma-bearing sternite filled up with numerous small round granules. Pedipalp seen from below (fig. 62, *c*); trochanter with 1 tooth; femur basally with 3 teeth, the inner one small, outer side with 1 middle and 1 subapical tooth, the middle larger than the subapical one; inner side with 3 moderate teeth, 3 intero-dorsal teeth; 2-3 dorsal teeth; femur seen laterally from inner side as in fig. 62, *d*; patella, tibia, and tarsus below as in fig. 62, *b*; whole of pedipalp above with fairly even granulation, below tibia with uniform fine granulation,



tarsus shiny; chelicera with segment I granular above, 2-3 small teeth at distal apex, segment II smooth anteriorly except for a few indistinct granules (figs. 62, *f*, *g*); femur of leg I armed as in fig. 62, *e*; tarsal segments 4 : 13-16 : 4 : 4.

*Measurements*.—Length of body 4.7, breadth 3.5, pedipalps 5.5 mm.

♀. As in ♂ but dorsal scute more densely granular; free tergites with more than 1 row of minute granules, II with at least 3, III with the space between anterior and posterior rows almost entirely filled up with minute granules; femur of pedipalp as in ♂, but seen from below the outer apical tooth absent or minute, the inner basal tooth obsolete, the 3 intero-dorsal and dorsal teeth larger than in the ♂; remaining segments of pedipalp spined as in ♀ of *L. calcarata*; femur of leg I and chelicerae as in ♂; tarsal segments 4 : 13-15 : 4 : 4.

*Measurements*.—Length of body 5.4, breadth 3.4, pedipalps 4 mm.

Types, 1 ♂, 2 ♀♀, Simonstown, Cape Province. Numerous other specimens of both sexes from St. James, Hout Bay, Kalk Bay, Bergvliet, Newlands, all Cape Peninsula.

*Larifuga weberi* Loman.

(Text-fig. 63, *a-f*.)

1898. Loman, Zool. Jahrb. Syst., ii, p. 527, t. 31, f. 18-23.

1914. Roewer, Arch. Naturg., lxxx, A, fasc. 12, p. 151, f. 48.

1923. Roewer, Die Weberknechte der Erde, p. 624, fig. 784, *a-g*.

*Colour* of body a rich reddish brown, appendages lighter distally.

♂. Appearance and armature of body as in fig. 784, *a*, Die Weberknechte der Erde, Roewer, p. 624; anterior upper margin of carapace with a row of about 9 stout tooth-like granules, 2 at each latero-anterior angle of carapace, the distal one much the larger; dorsal scute with regular transverse rows of granules dividing it into 4 smooth areas, each area with a pair of conical granules in the middle, these small, the fourth pair a little larger; conical granules of posterior margin of dorsal scute and free tergites large; sternites shagreened with a close-set anterior marginal row of small granules and a middle row of larger granules 2-3 times the size of anterior granules; inferior surface of coxa I covered with conical granules, coxae II-IV more or less smooth with some scattered granules, a row of small granules between them, posterior margin of coxa IV and anterior margin of stigma-bearing sternite each with a straight regular row of small granules, these rows meeting at the sides; genital operculum longer

than broad, roughly triangular in shape. Pedipalp: trochanter with 2 subequal teeth below, the inner one which is the shorter sometimes absent; femur seen from below (fig. 63, *b*) with 2 large basal teeth, these much the largest teeth on the ventral surface, the remainder

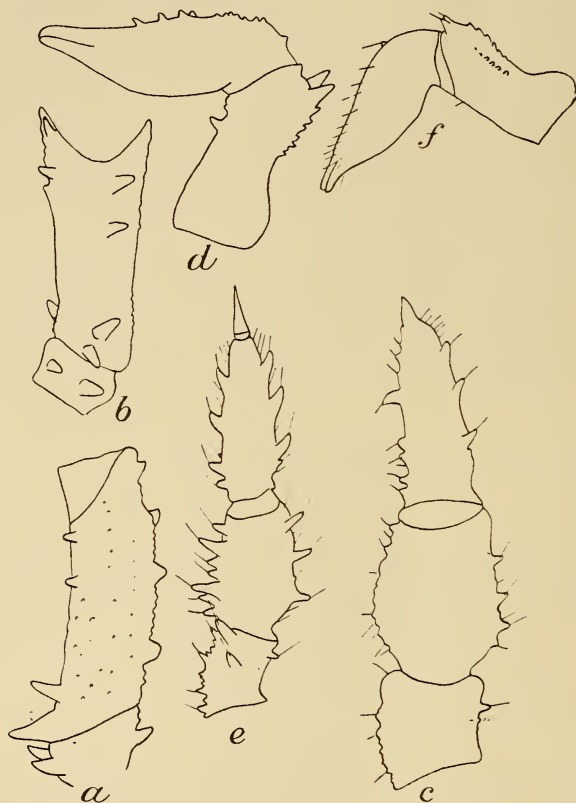


FIG. 63.—*Larifuga weberi* Loman. ♂: *a*, femur of palp from outer side; *b*, from below; *c*, patella-tarsus below; *d*, chelicera. ♀: *e*, patella-tarsus of palp below; *f*, chelicera.

being small; on the outer side 2 small teeth near the apex, on the inner side 2 small teeth near the apex about as far from each other as those of the outer side but both situated a little more distally; a row of 4 small intero-dorsal teeth and a row of about 4 dorsal teeth; patella, tibia, and tarsus seen from below as in fig. 63, *c*, patella and tibia practically unarmed, tibia with 3 small teeth on the outer side, tarsus with 3 small teeth on the outer side and 1 distinct tooth on the

inner side; chelicera (fig. 63, *d*) with dorsal surface of segment I granular, its distal edge with a row of 3-4 small teeth, the inner one largest, the rest becoming successively smaller, the distal half of its inner surface shagreened, the proximal half shiny, below with a tooth-like granule near the apex; segment II shiny, its anterior surface with some coarse irregular granules; femur of leg I armed as in fig. 784, *f*, *Die Weberknechte der Erde*, Roewer, p. 624; tarsal segments 4 : 15-22 : 4 : 4.

*Measurements.*—Length of body 5.6, breadth 4, pedipalps 6.5 mm.

♀. As in description of ♂; pedipalp smaller than in ♂; trochanter below with 1 tooth above, 1 below; femur with 4 teeth above; patella as in fig. 63, *e*, seen from below with 2 inner spines, tibia and tarsus with 3 spines on each side; chelicera (fig. 63, *f*) with the 4 little teeth bordering the distal upper edge of segment I much reduced but present, seen from above there are behind these teeth some rows of small granules and an intero-dorsal row of about 4 small granules; in the ♂ the first segment of tarsus I is swollen and thicker than the other segments, in the ♀ all the segments are of an equal thickness; femur I armed below as in ♂; tarsal segments 4 : 20 : 4 : 4.

*Measurements.*—Length of body 6, pedipalps 5.5 mm.

Description and figures based on a ♂ and ♀ taken with about 200 adult specimens collected at Knysna; these have been carefully compared in all details with cotypes (♂ and ♀) sent to us from the Zoological Museum, Amsterdam, and agree in all respects with them; the above description only differs from the description in *Die Weberknechte der Erde*, p. 264, in two respects: (*a*) 2 instead of 1 tooth on the ventral surface of trochanter of pedipalp, and (*b*) 1 tooth-like granule on the ventral surface of segment I of the chelicerae (fig. 784, *g*, in Roewer's description shows 3); in the above two characters the cotypes agree with the description given above.

This species is easy to distinguish from all others of the genus by the fact that all the teeth on the ventral surface of the pedipalp femur except the 2 basal ones are very small, almost obsolete; the teeth on the pedipalp of the ♂ are actually smaller than those of the ♀, while the reverse is the case in all the other species. *L. weberi* resembles *L. calcarata* from Humansdorp most closely, but differs markedly from it in the absence of a long tooth at the inner apex of the pedipalp femur.

## Gen. MONTADAEUM n. gen.

Dorsal scute grooved as in fig. 64, *a*, the four areas with transverse rows of coarse round granules, the central pair in each area a little larger than the others; ocular tubercle ending in a single spine provided at its base with round smooth granules; sternum (fig. 64, *d*) distinctly pentagonal, much broader than in other genera of *Adaeinae* ( $\frac{2}{3}$  as wide as long); pedipalps weakly armed, femur below with only 1 or 2 large teeth, but strongly rugose; neither femur of leg I nor of other legs armed inferiorly as in *Larifuga*; chelicerae unarmed, with weak granulation; calcaneus much shorter than astragalus in legs I-IV; tarsus I with 5 segments (in the ♀♀ 4 only), II with 13-17, III and IV with 4 each; body stout and large.

One species, Western Cape Province.

*Montadaeum purcelli* n. sp.

(Text-fig. 64, *a-i*.)

*Colour* blackish brown, the distal segments of the appendages lighter; dorsal scute with indistinct grooves dividing it into areas provided with round coarse granules varying a little in size, these granules more numerous posteriorly to and at the sides of the ocular tubercle (fig. 64, *a*); the central pair of granules in each area a little larger than the others in the row; ocular tubercle seen in profile as in fig. 64 *b*; upper anterior margin of carapace with a row of round moderate-sized granules smaller than those found on other parts of carapace and dorsal scute; free tergites with an anterior marginal row of minute granules and a middle row of large round granules; sternites with 1 row of well-separated small granules in the middle; coxa I on its inferior surface with coarse conical granules, II-IV sparsely covered with round granules, coxa IV with 4-5 elongated granules on its posterior margin at the sides bridging the cleft between it and the stigma-bearing sternite. Pedipalp: trochanter below with 1 large tooth and a smaller one on each side; femur below with 1 enlarged tooth at the base in the middle (figs. 64, *e, f*), a row of 3 denticles on the outer side, the apical one the largest, a small apical tooth on the inner side; femur covered with coarse granules except in the middle below, above with 2 rows of tooth-like granules tipped with setae, the inner row consisting of 6, the outer of 5 granules, the granules of the inner row larger than those of the outer (fig. 64, *g*); patella and tibia unarmed, their ventral surfaces covered with closely



packed round smooth granules; tarsus flattened, comparatively long and slender, its ventral surface slightly concave with 3 blunt teeth on each side (fig. 64, *h*); chelicera (fig. 64, *c*) stout, unarmed, segment I shagreened at the sides and above, a few small granules below; segment II smooth, its anterior surface with a row of 4 denticles, the third large, the fourth small; femur of leg I not armed with conical spines but rugose, remaining femora similar; tarsus I with 5 segments (in one leg 6), the terminal section consisting of 2 segments (fig. 64, *i*); tarsal segments I, 5-6; II, 15-17; III, 4; IV, 4.

*Measurements*.—Length of body 7·2, breadth 5·8, pedipalps 8·2 mm.

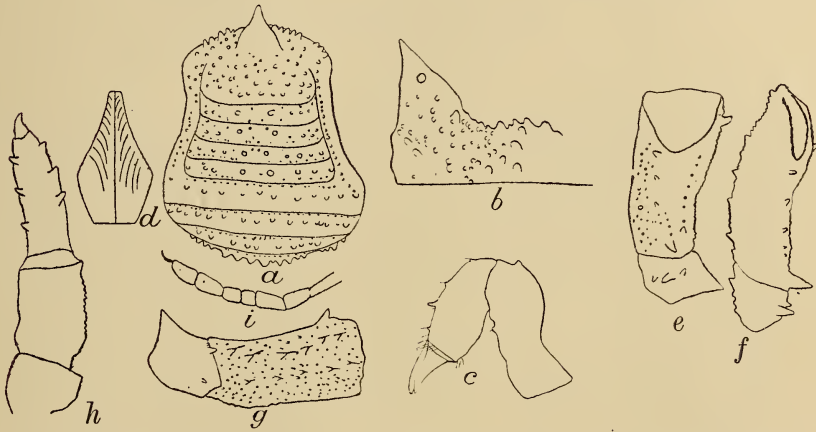


FIG. 64.—*Montadaeum purcelli*. ♂: *a*, dorsal surface of body; *b*, ocular tubercle; *c*, chelicera; *d*, sternum; *e*, femur of palp below; *f*, from inner side; *g*, above; *h*, patella-tarsus of palp below; *i*, tarsus I.

♀. Closely resembling ♂, pedipalps smaller and shorter than in ♂, femur seen from above slender at the base and broadening apically, where it is almost twice as broad as at the base; whole of femur strongly granular except a strip in the middle below which is smooth; armature as in ♂ except that patella has 2 indistinct teeth on the inner side, tibia 3 outer, 2-3 inner lateral teeth, tarsus 3 teeth on each side larger than in ♂; chelicerae and femur of leg I as in ♂; genital operculum distinctly broader than long, in ♂ as long as broad or a little longer than broad; tarsal segments I, 4; II, 13-15; III, 4; IV, 4.

*Measurements*.—Length of body 7·6, breadth 6·1, pedipalps 6·4 mm.

Types, 2 ♂♂, 2 ♀♀, Bergvliet, Cape Peninsula.



## PARADAEUM n. gen.

Sternum as in fig. 65, *b*, narrow, parallel-sided and rod-like in anterior half, then widening suddenly and forming a roughly pentagonal figure which is as wide as or a little wider than long. Body and appendages rugose, covered with small bead-like granules, no greatly enlarged teeth or granules. Stigmae clearly visible, no enlarged conical granules bridging the cleft between coxa IV and stigma-bearing sternite; tarsus I consisting of 4, tarsus II of more than 6 segments; terminal section of I consisting of 2, II of 3 segments.

*Paradaeum rattrayi* n. sp.

(Text-fig. 65, *a-e*.)

*Colour* olive green without dark infuscations.

Dorsal surface entirely but not thickly covered with small bead-like granules, no enlarged club-shaped or tooth-like granules; these bead-like granules slightly more dense at the sides of and posterior to the ocular tubercle than elsewhere, those of the four areas of the dorsal scute a little denser in the middle, forming ill-defined transverse strips; anterior margin of carapace without enlarged teeth or granules; ocular tubercle (fig. 65, *a*), conical and rounded at its apex, unarmed; areas I-IV with a pair of granules (sometimes duplicated) in the middle, arranged as in *Larifuga*; these granules while much larger than the bead-like granules are yet indistinct and not clearly visible to the naked eye; free tergites with scattered bead-like granules and an irregular transverse row of larger granules near their posterior border; sternites with bead-like granules on their anterior halves, smooth on posterior halves; last sternite covered with scattered bead-like granules; coxae below uniformly but not densely covered with bead-like granules, some larger ones near their bases; coxa I with enlarged conical seta-tipped granules, those along the anterior margin larger than the rest; genital operculum without conical papillae but with some setae along its anterior margin (fig. 65, *b*). Pedipalp as in fig. 65, *d*, covered entirely (a little less strongly on ventral surface) with small bead-like granules; trochanter with 2 teeth below, the outer larger than the inner one; femur below with 3 large teeth on the outer side, 2 near the base, 1 near the apex, these teeth decreasing successively in size distally; inner side with 1 small tooth near the base, 2-3 about the middle, and 2 at apex, the most distal of these latter the smaller; under surface of femur in proximal half matt, without bead-like granules;

patella with 2 small teeth on inner side, tibia with 2 or 3 teeth on each side, tarsus with 3 teeth on each side. Chelicera : segment I above in distal  $\frac{3}{5}$  with small round granules, a stout conical tooth at upper apex, the sides matt ; segment II smooth at the sides, anterior surface with some small sharp teeth and some stout setae near apex (fig. 65, e).



FIG. 65.—*Paradaeum rattrayi*. a, body from the side ; b, sternum ; c, tarsus I ; d, palp from outer side ; e, chelicera.

Leg I without armature, rugose, basal segment of tarsus long, not much shorter than the sum of remaining segments (fig. 65 c) ; terminal section of tarsus I consisting of 2, II of 3 segments ; tarsal segments 4 : 13-16 : 4 : 4.

*Measurements*.—Length of body 5·7, breadth 4·6, pedipalps 5 mm.

Types, 3 ♀♀ (?), Hogsback, Amatola Mountains, Eastern Cape Province. Collected by Dr. G. Rattray. Types in the Albany Museum, Grahamstown.

## C. SUBORDER PALPATORES.

Two eyes (seldom blind), one on each side of a tubercle or frontal process situated in the middle of the carapace or near its anterior margin (fig. 68, *a*) ; openings of odoriferous glands not situated on a small cone but usually distinctly visible at the lateral margins of the carapace behind coxa I ; both the tergites of the prosoma recognisable, or completely fused with the carapace and not apparent ; abdomen with 9 tergites, the terminal one the anal operculum ; tergites I-V fused into a chitinous or soft scute, and this scute demarcated from the 2 tergites of the prosoma by a distinct transverse groove ; sternites II-VII distinct, sternites VIII and IX when present, together with the anal operculum and vestiges of the original IX sternite when this is present, forming the corona analis ; sternite I more or less retained as arculi genitales ; sternite II with a distinct genital operculum and with 2 stigmæ ; pedipalp thin, usually slender, antenniform, all segments without long spines or teeth, tarsus with or without a short weak terminal claw (figs. 68, *e* ; 67 *d*) ; maxillary lobe of coxa I distinct, movable ; maxillary lobe of coxa II either long and movable, or short and almost immovable, or absent ; labium present, its chitinous portion at least medially united with the maxillary lobe of coxa I by a soft membrane ; sternum very short, at most hardly as long as broad ; coxæ I-IV either immovably fused together or freely movable. Legs : leg I always shorter than leg II, tarsi I-IV with 1 terminal claw ; penis long, often very long, thin, the glans distinctly differentiated and many times shorter than the corpus penis, drawn out apically into a narrow process ; ovipositor either annulate or altogether soft ; secondary sexual characters of ♂ sometimes few or absent, sometimes strongly developed in chelicerae, pedipalps, or legs ; no or slight metamorphosis, seldom significant.

The suborder is divided into two Tribes which may be distinguished as follows :—

1. Pedipalp tarsus shorter than pedipalp tibia, with none or a very small terminal claw ; maxillary lobes of coxa II very small, immovable or absent ; accessory stigmæ not present on the legs . . . . . Tribe *Dyspnoi*, p. 469.

Pedipalp tarsus longer than pedipalp tibia and always provided with a distinct terminal claw (simple or serrated) ; maxillary lobes of coxa II distinct, long and slender, movable ; 2 accessory stigmæ on the tibiae of legs I-IV

Tribe *Eupnoi*, p. 472.

TRIBE DYSPNOI Hansen and Sorensen.

1904. Dyspnoi Hansen and Sorensen, Two Orders of Arachnida, p. 81.

1923. Dyspnoi Roewer, Die Weberknechte der Erde, p. 633.

Cutting edge of fingers of chelicerae at least partly armed with small pale sharply triangular teeth; tarsus of pedipalp shorter than tibia; terminal claw of tarsus of pedipalp rudimentary or absent. Maxillary lobe of coxa I: the chitinous portion nearest to the coxa very short, the chitinous portion lying farthest from the coxa much broader than long; maxillary lobe of coxa II either small, short, and almost immovable, or absent; labium fused with the maxillary lobes of coxa I up to well past the middle or to its apex. Stigmae of stigma-bearing sternite bridged over with granules; accessory stigmae on the legs absent; arculi genitales hidden except for a free plate in front of the genital operculum; genital aperture small and opening far in front of the transverse groove dividing the II and III sternites; ovipositor short, not annulate, its apex small.

Four families of which two, the *Trogulidae* and *Nemastomatidae*, occur in North Africa, and one, the *Acropsopilionidae*, is found in South Africa.

FAM. **ACROPSOPILIONIDAE** Roewer.

1923. Roewer, Die Weberknechte der Erde, p. 678.

Both thoracic tergites free and as in all the tergites not fused into a scute; a common tubercle for both eyes absent; carapace on each side raised and projecting anteriorly, covering the chelicerae, depressed in the middle, the lateral corners projecting angularly and each bearing at the side 1 large (faceted ??) eye; sternites I and II fused (sternite III—according to Silvestri's fig.—free ?), but sternite II without a distinct genital operculum (Silvestri's fig.) and on each side with 1 stigma; sternites IV–VII free; corona analis present ?; arculi genitales, sternum, labium ?; maxillary lobe of coxa I large (movable ?), that of coxa II small (immovable ?), that of coxa III vestigial, that of coxa IV absent; cutting edge of finger of chelicerae provided with small fine teeth; tarsus of pedipalp much smaller than tibia, with 1 minute terminal claw; legs long and slender, metatarsi I–IV without (?) calcaneus, tarsi I–IV each with 1 simple claw; penis long; metamorphosis ?.

This family was based on 1 genus and 1 species, *Acropsopilio chilensis*,



described by Silvestri in Redia, ii, p. 254 from Pitrufulquen, Chile, and a synopsis of his description with 3 figures is given by Roewer in Die Weberknechte der Erde, p. 678.

One genus is found in South Africa.

Gen. OONOPSOPILIO n. gen.

The eyes large, simple, not situated on a common tubercle but each eye placed at the side of a large tubercle projecting forwards at each antero-lateral corner of carapace and reaching beyond the anterior margin of carapace, their bases meeting in the middle line (figs. 66, *a, c*); both thoracic tergites fused; tergites of abdomen fused except the last; sternites fused except the last 1 or 2 which are free, the fused sternites clearly demarcated by grooves which, however, do not reach the sides; pedipalp femur with blunt papillae not ending in a single spine, but provided apically with a number of setae; legs long and slender, femora I-IV with a false joint near their bases; tarsal joints varying from 14-21; terminal section of tarsi consisting of 1 or 2 joints.

*Oonopsopilio africanus* n. sp.

(Text-fig. 66, *a-e*.)

*Colour*, 1 specimen (type) from Ladismith. Body above mottled brown, white, and black, ocular tubercles seen from the side with a broad black ring round the eyes so that the whole tubercle appears black except for a narrow marginal yellow band anteriorly and posteriorly; below sternites whitish, coxae whitish mottled with brown, genital operculum infuscated dark brown at its periphery; pedipalp with femur at its base above, patella, tibia, and tarsus infuscated blackish; legs with white and brown annulations, tarsal segments blackish.

In the one specimen from the Addo Bush the colouring seen from above is an almost uniform brown with a broad median longitudinal band bordered by a sinuous brown stripe a little darker than the colour of the sides but hardly distinguishable from them; seen from the sides, the lateral margin of the carapace extending from the third coxa anteriorly is white with a narrow black band above it; under surface of body a uniform dirty white not mottled. The other specimen from the Addo Bush is similarly coloured except that the median band and eye tubercles above are silvery white mottled with a few darker spots; the median band is bordered on each side by a fine sinuous



black line and contrasts strongly with the brown sides; most of the specimens from Cape Town have this type of colouring.

Eyes placed on tubercles which are bluntly pointed anteriorly; these tubercles project forwards and meet in the middle line, their anterior inner surfaces being opposed to each other, forming an incision which is almost a right angle; seen from the side, the tubercles are egg shaped, the narrow end of the egg facing posteriorly (fig. 66, *a*); the eyes simple and large, occupying nearly a third of the length of tubercle; when the animal becomes a little dry, shrinkage of the large surface of the eye gives it a superficial resemblance to a faceted eye, and this is probably what has caused Silvestri to figure the eye of

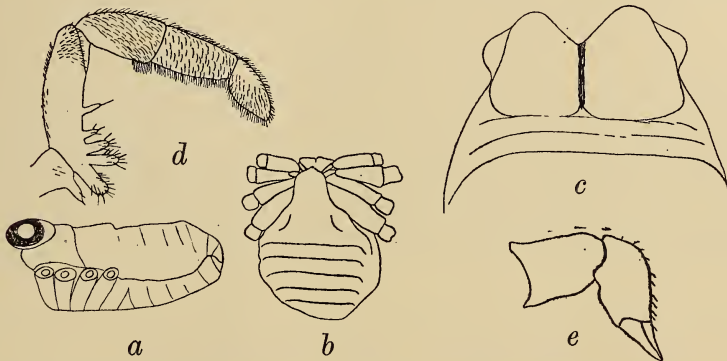


FIG. 66.—*Oonopsopilio africanus*. *a*, body from the side; *b*, ventral surface of body; *c*, anterior portion of body from above; *d*, palp; *e*, chelicera.

*Acropsopilio* as “genetzt.” The skin of body smooth and without armature; it is much wrinkled and displaced in spirit specimens and it is therefore difficult to describe the segmentation with certainty, which seems to be as follows: thoracic tergites fused, abdominal tergites except the last fused, though distinguishable from each other by grooves which are more easily seen at the sides of the body; sternites except the last 1–2 fused, separated from each other by distinct grooves which end before reaching the sides of the body; only the maxillary lobes of coxae I and II visible, these small (fig. 66, *b*); genital operculum as in fig. 66, *b*. Pedipalp as in fig. 66, *d*, seen from the inner side, femur with a brush of black hairs above near apex, an apical patch of black hair on inner side; patella, tibia, and tarsus well covered with uniformly disposed black hairs; chelicera as in fig. 66, *e*. Legs: femora, patellae, and tibiae with 2 rows of small black spines at the sides, 1 ventral row and 1 dorsal

row, the spines of these rows well separated from each other; metatarsi with a brush of short fine black hairs along its ventral surface, all tarsal segments with similar hairs along their ventral surfaces; tarsal segments 14-22.

Type, 1 specimen from Ladismith, Cape Province.

Other specimens: 1 from Worcester Mountains (5000 feet altitude); 2 from Addo Bush; 6, Table Mountain (in grass); 1, Simonstown; 1, Plumstead, Cape Peninsula; 4, Caledon; 7 (3 ♂♂), Signal Hill, Cape Town; only those in which the penis is actually protruding are reckoned as males. All these are fully adult specimens as those in which the penis is visible differ in no way from those where it is not; the penis itself in proportion to the size of the animal is very long and stout. The differences of colour may be either due to the age or sex of the animals; there is also some variation in the papillae found on the ventral surface of pedipalp femur which are sometimes longer and more slender than as shown in fig. 66, *d*, or the two basal papillae are replaced by one which is bifurcate at the tip. These variations occur in 2 specimens from Ashton, C.P.; 3 (1 ♂) from St Helena Bay, C.P. In one specimen from Caledon with all the legs intact the tarsal segments are I, 14-15; II, 17-18; III, 15; IV, 17-19.

#### TRIBE EUPNOI Hansen and Sorensen.

1904. Eupnoi Hansen and Sorensen; *Two Orders of Arachnida*, p. 80.

1923. Eupnoi Roewer, *Die Weberknechte der Erde*, p. 697.

Cutting edge of fingers of chelicerae armed only with strong (blackish) teeth; tarsus of pedipalp distinctly longer than tibia; terminal claw of tarsus of pedipalp always distinct, simple or serrate; maxillary lobe of coxa I: the two chitinous portions about equal in length, maxillary lobe of coxa II distinct, long and movable; labium fused with the maxillary lobe of coxa I to about its middle; sternum transversely almost entirely covered by the anterior free plate of the arculi genitales; stigmata exposed; 2 accessory stigmata on each of the I-IV tibiae (these stigmata not exposed in juveniles); arculi genitales visible close to the genital operculum and forming in front of the genital operculum a free anteriorly projecting plate; genital opening very large and not commencing far in front of the transverse groove which divides the II and III sternites; ovipositor long, annulate in its entire length, the annulations beset with setae, its apex deeply cleft by the first 3 annulations.

A single family, the *Phalangiidae*, cosmopolitan in distribution, is redivided into 7 subfamilies; of these 6 occur in Africa but only 2, the *Phalangiinae* and *Neopilioninae*, have representatives in the South African region.

*Key to subfamilies.*

1. Tarsus of pedipalp with a distinct terminal claw, cutting edge of claws of chelicerae with irregularly disposed small and large teeth (fig. 68, *d*)

*Phalangiinae*, p. 475.

- Tarsus of pedipalp with terminal claw absent or minute, cutting edge of claws of chelicerae with small equal-sized teeth (fig. 67, *f*)

*Neopilioninae*, p. 473.

SUBFAM. **Neopilioninae** n. subfam.

Thoracic tergites defined by distinct grooves, abdominal tergites not distinctly defined; corona analis absent; openings of odoriferous glands at sides of carapace visible from above; coxae without anterior or posterior rows of granules; maxillary lobes of coxa II not directed towards each other at an angle but forming a more or less straight line at right angles to the longitudinal axis of the body (fig. 67, *c*), chelicerae small, segment I without a ventral process and unarmed; cutting edge of claws of segment II with teeth of uniform size (fig. 67, *f*); pedipalp unarmed, tibia and patella at least densely clothed with hairs (fig. 67, *d*); tarsus with very minute terminal claw,\* simple and not serrated; legs unarmed; secondary sexual characters of ♂ absent; metamorphosis slight.

One genus in South Africa.

Gen. **NEOPILIO** n. gen.

Body size small; skin of body soft and unarmed, ocular tubercle unarmed; abdominal tergites defined by indistinct grooves, thoracic tergites by distinct grooves, last two sternites more distinctly defined than the remainder; coxae smooth; pedipalp not armed with spines or teeth, terminal claw of tarsus minute, tarsus much longer than tibia, patella and tibia thickly covered with hairs (fig. 67, *d*); chelicerae unarmed, much smaller than body, claws of segment II with numerous small more or less equal-sized teeth (fig. 67, *f*); legs without teeth

\* In some specimens this claw cannot be seen at all, in specimens where it is present it is only visible under low power of the microscope.

or spines, femora without nodules or pseudo-articulations; secondary sexual characters not present in ♂.

One species, Western Cape Province.

*Neopilio australis* n. sp.

(Text-fig. 67, a-g.)

*Colour*.—Body as in fig. 67, b, ventral surface, chelicerae, pedipalps, and legs pale yellow.

Anterior margin of carapace smooth, ocular tubercle low rounded and smooth or with a few minute spicules above; abdominal and

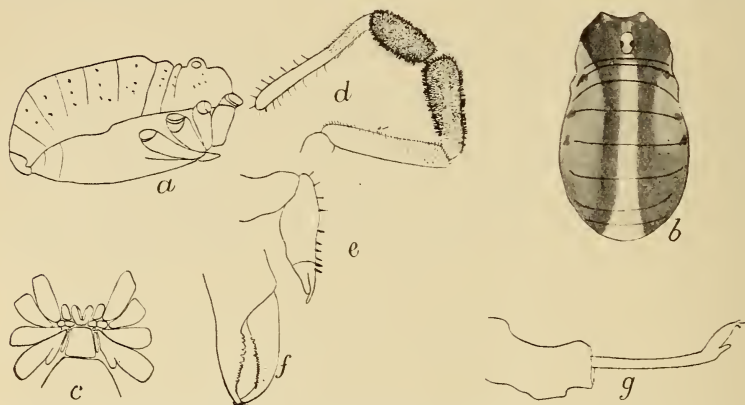


FIG. 67.—*Neopilio australis*. a, body from the side; b, from above; c, ventral surface (somewhat schematic); d, palp; e, chelicera; f, claws of chelicera; g, penis.

thoracic tergites with a few minute almost invisible spicules, otherwise quite smooth; coxae and sternites smooth, the former with a few setae. Pedipalp as in fig. 67, d; terminal claw of tarsus minute, simple and not serrate; femur with colourless short hairs, more so on its ventral surface, patella and tibia with a fairly dense brush-like covering of these hairs, tarsus with a band of hairs near its base, these not as dense as those of patella and tibia; pedipalp otherwise entirely smooth; chelicera small, entirely smooth (fig. 67, e), segment II with a few setae, claws of segment II with small equal-sized teeth (fig. 67, f), those of the immovable claw bifid or trifid in proximal half, conical in distal half. Legs entirely without teeth, femora and tibiae with short setose spines, metatarsi and tarsi with fine minute hairs; tarsal segments I, 30; II, 57; III, 28–30; IV, 33.



Secondary sexual characters seem to be absent in the ♂ which is in all respects similar to other specimens ; penis seen from the side as in fig. 67, *g* (specimen from Simonstown).

*Measurements* of largest of types.—Length of body 5.5, pedipalp 5.4, chelicera I+II, 1+1.6 mm.

Types, 17 specimens from Signal Hill, Cape Town. Most of the remaining specimens, 49 in number, are from the same locality. Other localities : Simonstown (6), Newlands (2), Caledon (3), Hout Bay, Cape Peninsula (1), St James, Cape Peninsula (3), Touws River (1).

SUBFAM. **Phalangiinae** Simon.

1923. Roewer, *Die Weberknechte der Erde*, p. 746.

Both thoracic tergites and abdominal tergites I–VIII together with the operculum anale clearly demarcated by transverse grooves, the I–V abdominal tergites very seldom fused into a scute ; corona analis absent ; openings of the odoriferous glands at the sides of the carapace and clearly visible from above ; coxae I–IV without a posterior and anterior row of granules ; maxillary lobes of coxa II long and slender, forming with each other a blunt angle at the anterior margin of the genital operculum, the sides of the angle directed backwards. Chelicera : segment I below always without 1 forwardly directed spine, unarmed ; cutting edge of fingers with large and small teeth ; pedipalp : maxilla provided with 2 granules ; terminal claw of tarsus always distinct, simple and not serrate ; legs long, femora I–IV always without nodules ; penis (*in situ*) with backwardly directed apex ; secondary sexual characters abundant and often strongly developed in chelicera, pedipalp or legs ; metamorphosis slight, the forms in which the males show the most outstanding secondary sexual characters do not possess them in the younger stages.

The subfamily has a world-wide distribution and is a large one, containing 31 genera, of which 14 occur in Africa but only 1, *Rhampsinitus*, is found in the South African region.

Gen. **RHAMPSINITUS** Simon.

1879. Simon, *Ann. Soc. Ent. Belg.*, xxii, p. 72.

1923. Roewer, *Die Weberknechte der Erde*, p. 784.

Ocular tubercle normal, about as high as wide, toothed on each side above, distant from the anterior margin of carapace  $1\frac{1}{2}$ –2 its long diameter ; surface of carapace in front of ocular tubercle usually



toothed; abdomen above without large spines (these seldom larger than the spines on the ocular tubercle, generally much smaller); lamellae smooth; chelicera in ♀ small and normal, in the ♂ with strong secondary sexual characterisation; segment I shortly cylindrical, much drawn out, directed obliquely upwards far beyond the anterior margin of the carapace; segment II similar to segment I in appearance and length, not broader than segment I and almost cylindrical; both fingers of chelicera relatively quite short and stout, their length only  $\frac{1}{4}-\frac{1}{5}$  that of segment II (fig. 68, c); pedipalp in ♀ normally constructed, in ♂ usually much elongated and then very slender, patella apically and medially sometimes with an apophysis; legs long and slender, in the ♀ all 4 legs normal, in the ♂ leg I with secondary sexual characters more or less developed; femur-tibia I more or less incrassate or quite differently armed apically; secondary sexual characters developed in chelicera, also often in pedipalp and leg I.

*Distribution*.—Africa from the Sahara southwards to the Cape; 29 species, of which 19 are found in South Africa.

*Key to species, ♂♂.*

1. Dorsum of abdomen thickly and irregularly covered with spines . . . 2.  
Tergites of abdomen each with 1 or 0 transverse rows of small spines . . . 8.
2. Spines on dorsum of body with accessory spicules at their sides (fig. 75, e) *cristatus*, p. 489.  
Spines on dorsum of body without accessory spicules . . . 3.
3. Sternites and genital operculum thickly covered with granules *capensis*, p. 478.  
Sternites and genital operculum smooth . . . 4.
4. All coxae granular below . . . 5.  
All coxae smooth or coxa I with a few granules . . . 7.
5. Chelicerae longer than pedipalps, ocular tubercle above with 4 pairs of spines *lalandei*, p. 494.  
Chelicerae shorter than pedipalps, ocular tubercle above with 3 pairs of spines 6.
6. Anterior margin of carapace with an enlarged median spine projecting forwards beyond its edge, area between this spine and ocular tubercle smooth in the middle . . . *hispidus*, p. 499.  
Anterior margin of carapace and the area between it and ocular tubercle uniformly and thickly spined . . . *echinodorsum*, p. 500.
7. Pedipalp spined, not longer than body length . . . *littoralis*, p. 480.  
Pedipalp smooth, very long, 4 times length of body . . . *longipalpis*, p. 483.
8. Tergites of abdomen smooth without a transverse row of small spines *levis*, p. 487.  
Tergites of abdomen each with 1 transverse row of spines . . . 9.
9. Pedipalps with femora and sometimes patellae sparsely granular . . . 10.  
Pedipalps entirely smooth . . . 12.
10. Both segments of chelicerae entirely smooth . . . *minor*, p. 496.  
Segment I of chelicera at least armed . . . 11.

11. Coxae I and II granular, ocular tubercle above with more than 3 pairs of spines  
*telifrons*, p. 497.  
All coxae smooth, ocular tubercle above with 3 pairs of spines *vittatus*, p. 482.
12. Pedipalps shorter than or equal to chelicerae . . . . . 13.  
Pedipalps longer than chelicerae. . . . . 15.
13. Carapace between its anterior margin and ocular tubercle thickly and irregularly  
spined in the middle, ocular tubercle above with 4 pairs of small spines  
*granarius*, p. 501.  
Carapace between its anterior margin and ocular tubercle smooth in the middle,  
ocular tubercle above with 3 pairs of long spines . . . . . 14.
14. Segment I of chelicera below on outer side with a row of enlarged curved  
teeth besides smaller granules (fig. 77) . . . . . *transvaalicus*, p. 493.  
Segment I of chelicera below without enlarged teeth, all teeth small and more  
or less equal sized (fig. 82) . . . . . *leighi*, p. 497.
15. Legs long and slender, leg II 10 or more times body length . . . . . 16.  
Legs shorter, leg II 4-7 times body length . . . . . 17.
16. Legs almost smooth, spines of femora very minute, femur I below without  
enlarged spines at inner apex . . . . . *silvaticus*, p. 491.  
Femora of legs with distinct rows of spines, femur I below with 2-3 enlarged  
spines at inner apex . . . . . *unicolor*, p. 485.
17. Femur I below with 3-4 enlarged tooth-like spines at inner apex  
*flavidus*, p. 486.  
Femur I below with no enlarged spines at inner apex . . . . . 18.
18. Carapace between anterior margin and ocular tubercle with about 20 equal-  
sized spines . . . . . *crassus*, p. 495.  
Carapace between anterior margin and ocular tubercle with about 10 spines,  
1 median spine on anterior margin of carapace larger than the rest  
*spenceri*, p. 498.

Key to species, ♀♀.

1. Dorsum of abdomen thickly and irregularly covered with spines . . . . . 2.  
Tergites of abdomen each with 1 or 0 transverse rows of small spines . . . . . 7.
2. Spines on dorsum of body with accessory spicules at their sides (fig. 75, e)  
*cristatus*, p. 491.  
Spines on dorsum of body without accessory spicules . . . . . 3.
3. Sternites and genital operculum thickly covered with granules *capensis*, p. 480.  
Sternites and genital operculum smooth . . . . . 4.
4. All coxae granular below . . . . . 5.  
All coxae smooth or coxa I with a few granules . . . . . 6.
5. Anterior margin of carapace with a median spine larger than the others on  
the carapace projecting forwards beyond its edge, ocular tubercle above  
with 3 pairs of spines . . . . . *hispidus*, p. 499.  
Anterior margin of carapace without an enlarged median spine, spines on  
carapace uniform in size, ocular tubercle above with 4 pairs of spines  
*lalandei*, p. 494

6. Anterior margin of carapace in the middle with 3 stout spines, segment I of chelicera granular above, legs short, leg II 5 times body length  
*littoralis*, p. 482.
- Anterior margin of carapace almost smooth, segment I of chelicera smooth, legs long, leg II 10 times body length . . . *longipalpis*, p. 485.
7. Tergites of abdomen smooth without a transverse row of small spines  
*levis*, p. 489.
- Tergites of abdomen each with I transverse row of spines . . . 8.
8. Carapace between anterior margin and ocular tubercle smooth or with 1-2 weak spines . . . 9.
- Carapace between anterior margin and ocular tubercle with 10-20 strong spines . . . 12.
9. Dorsum of body with a diamond-shaped black marking (fig. 76, b), legs with alternating light and dark bands . . . *silvaticus*, p. 491.
- Dorsum of body and legs uniform in colouring . . . 10.
10. Segment I of chelicerae more or less granular above . . . *leighi*, p. 497.
- Segment I of chelicerae smooth . . . 11.
11. Pedipalps smooth . . . *transvaalicus*, p. 494.
- Pedipalps with femur sparsely granular below . . . *minor*, p. 496.
12. Carapace between anterior margin and ocular tubercle with about 20 equal-sized spines . . . *crassus*, p. 495.
- 1 median spine on anterior margin of carapace larger than the rest, carapace between anterior margin and ocular tubercle with about 10 spines  
*spenceri*, p. 498.

The following species of *Rhampsinitus* are not included in the above keys as not occurring in the South African region : *R. ater*, *quadrispina spinifrons*, *filipes*, *lettowi*, *pictus*, *montanus*, *niger*, *bettoni*, from East Africa ; *pachylomerus* from Abyssinia. Descriptions and figures of these are given by Roewer in Die Weberknechte der Erde, pp. 784-795.

*Rhampsinitus capensis* n. sp.

(Text-fig. 68, a-e.)

♂. *Colour*.—Dorsal surface of body a light earthy brown, a median strip and the area on each side of the ocular tubercle a little darker ; all spines tipped with black, a V-shaped marking at anterior margin of carapace in front of ocular tubercle blackish ; ventral surface of body dirty white, sternites with 2 indistinct longitudinal brown stripes in the middle, coxae with their distal  $\frac{2}{3}$  and some spots at their bases brown, chelicerae a rich brown, segment I lighter above and blackish below, segment II blackish below, its anterior outer surface with some dark brown spots, palp and legs dark brown ; body covered with long

black-tipped spines except on the grooves dividing the tergites, the spines in the middle of the body long, longer than those on the ocular tubercle, those at the sides of the body generally shorter than those on the ocular tubercle, last 2 tergites with short spines, operculum anale with none; anterior margin of carapace in the middle with 3 stout spines directed forwards and upwards, the middle one stouter than the 2 lateral ones which are directed a little more upwards than the middle one; behind each of these a row of 2-3 shorter spines; another spine on the anterior margin of carapace a little shorter than the lateral spines and situated laterally to them (thus 5 spines on the anterior margin of carapace); antero-lateral angles of carapace with



FIG. 68.—*Rhampsinitus capensis*. ♂: *a*, ocular tubercle; *b*, chelicera from inner; *c*, from outer side; *d*, claws of chelicera enlarged; *e*, palp.

a group of small spines, 1 or 2 at the sides of the ocular tubercle; ocular tubercle as in fig. 68, *a*, the number of spines varying considerably, usually a large one alternating with a small one; behind ocular tubercle a transverse row of spines extending across carapace; coxae, genital operculum, and sternites all uniformly and thickly (especially coxae) covered with black-tipped granules.

Chelicerae as in fig. 68, *b*, seen from inner side (fig. 68, *c*, seen from outer side); segment I below with 5-6 large triangular teeth on the outer side, on inner side with some granules near the base, otherwise ventral and inner surface smooth; whole of upper surface with strong coarse spines varying considerably in size; segment II flattened on inner side, rounded on outer side, basal third of its anterior surface with small sharp granules. Pedipalp as in fig. 68, *e*. Legs: femur, patella, and tibia of leg I stouter than those of other legs with 5 distinct rows of spines; upper surface with 3 rows, a middle and 2 lateral rows, ventral surface with 1 row on each side; in addition an irregular row



of spines on each side between the dorso-lateral and ventro-lateral rows (these rows not present in leg II); the spines of the dorsal rows larger than those of the ventral rows in femur and patella, those of tibia more or less equal sized; femur I shortest, femur II longest of legs; tarsal segments I, 30; II, 64-67; III, 31-35; IV, 31-35.

*Measurements*.—Length of body 6.5, greatest width 4.5, chelicerae I+II, 2.1+3.8, pedipalps 5.7 mm.

♀. *Colouring* as in ♂. Spination; spines of dorsal surface of body smaller than in ♂, the larger ones in the middle of the body more distinctly demarcated from the smaller ones at the sides; coxae, genital operculum, and sternites granular as in ♂; chelicerae unarmed except for a few granules near upper apex of segment I; palp armed as in ♂ but less strongly so; legs more slender, the spines smaller than in the ♂. Tarsal segments 29:61:29:34.

*Measurements*.—Length of body 7.4, breadth 4.5, chelicerae 2.5, pedipalps 3.8 mm.

Types, 5 ♂♂, 2 ♀♀, Signal Hill, Cape Town. Other specimens: 4 ♂♂, 3 ♀♀, Signal Hill, Cape Town; 4 ♂♂, 10 ♀♀, Table Mountain; 1 ♂, 1 ♀, St Helena Bay; 2 ♀♀, Prince Albert Division; 1 ♀, Gordon's Bay; 3 ♀♀, Kalk Bay.

*Rhampsinitus littoralis* n. sp.\*

(Text-fig. 69, a-d.)

♂. *Colour*.—Dorsum of body at the sides blackish brown mottled with greyish spots, a darker longitudinal band in the middle expanding on the thoracic segments and including ocular tubercle and most of the carapace; spines bordering the sides of the median darker band white, those situated on the band itself and at the sides of the body greyish brown; the middle of the three spines on the anterior margin of carapace white, the lateral ones brown; ventral surface of body dirty white, 2 indistinct longitudinal brown stripes on the sternites extending along the sides of the genital operculum, distal  $\frac{2}{3}$  of coxae brown, some brown spots at their bases; chelicerae a rich brown, segment II lighter, the inner and outer sides except at apex speckled with small black spots; pedipalp with tarsus and apical third of tibia yellow, remainder dark brown; legs light brown, tibiae, especially apically, a little darker, tibiae and patellae, especially of posterior legs, speckled with small black spots above; colouring in general of the same type as in *capensis*.

\* In all probability *Phalangium rhinoceros* Strand, based on a ♀ from Simonstown, Cape Province, is identical with this species.



Tergites with rather irregular single rows of spines consisting of larger ones confined to the darker area in the middle (these a little larger than the spines on the ocular tubercle), and smaller spines at the sides of the body (these distinctly smaller than the spines on the ocular tubercle); in addition to these there are small scattered spines between the transverse rows of spines on the tergites; tergites VI and VII with small spines only, VIII and anal operculum with none; thoracic segments with a complete transverse row of small spines; anterior margin of carapace in the middle with 3 stout spines directed more forwards than upwards, the middle one considerably stouter than the lateral ones, its axis in the same plane or a little lower than these; area between these spines and ocular tubercle smooth, devoid of spines; 3-4 small spines at antero-lateral angles of carapace, carapace generally with much fewer spines than in *R. capensis*; ocular tubercle with 4 short stout spines, these constant in number not alternating with smaller spines, an incomplete transverse row of small spines behind ocular tubercle (fig. 69, a); coxa I with a few granules, remaining coxae, genital, operculum, and sternites without granules. Chelicerae (fig. 69, d) seen from outer side (fig. 69, c, seen from inner side), resembling those of *R. capensis*; segment I below on outer side with an irregular double row of about 9 teeth (in *R. capensis* a single row of 5-6), on inner side a double row of spine-like granules in proximal  $\frac{2}{3}$  of segment; segment II with a few granules basally on its anterior surface; pedipalp spined as in fig. 69, b, tibia smooth except for 1 or 2 spines proximally. Legs spined as in *R. capensis*, differing in the tibiae, on which, except for 2 inferior rows, the spines are barely perceptible; tarsal segments 35 : 62 : 33 : 38-40.



FIG. 69.—*Rhapsinitus littoralis*. ♂: a, ocular tubercle; b, palp; c, chelicera from inside; d, chelicera from outside.

69, a); coxa I with a few granules, remaining coxae, genital, operculum, and sternites without granules. Chelicerae (fig. 69, d) seen from outer side (fig. 69, c, seen from inner side), resembling those of *R. capensis*; segment I below on outer side with an irregular double row of about 9 teeth (in *R. capensis* a single row of 5-6), on inner side a double row of spine-like granules in proximal  $\frac{2}{3}$  of segment; segment II with a few granules basally on its anterior surface; pedipalp spined as in fig. 69, b, tibia smooth except for 1 or 2 spines proximally. Legs spined as in *R. capensis*, differing in the tibiae, on which, except for 2 inferior rows, the spines are barely perceptible; tarsal segments 35 : 62 : 33 : 38-40.

*Measurements*.—Length of body 7, breadth 4, chelicerae I+II, 2·5+4, pedipalps 6 mm.

♀. *Colour* and spination of body as in ♂; palp with weaker spination than in ♂, femur dorsally smooth, tibia with 1 or 2 minute spines; chelicerae with some granules above on segment I, segment II smooth.

*Measurements*.—Length of body 6, breadth 4·3, chelicerae I+II, 3, pedipalp 4·4; leg II, 28 mm.

Types, 2 ♂♂, 4 ♀♀, Hermanus, Cape Province (collected R. Lightfoot, 1902). Other specimens: 18 ♂♂, 52 ♀♀, Hermanus (collected C. de Villiers and R. F. Lawrence, 1929). Other localities: St James, Bergvliet, Cape Flats, Plumstead, Kalk Bay, Maitland, Retreat, all Cape Peninsula. This species is allied to *R. capensis* in colouring and especially in the structure of the ♂ chelicerae; it can easily be distinguished from it by the fewer and smaller spines on the dorsum of body, the spines of the ocular tubercle, and the absence of granulation on the inferior surface of the body. Both species, it will be noted, occur in the Cape Peninsula; *capensis* is in all probability a monticolous form, while *littoralis*, which has not been recorded from mountains, lives in flat, low-lying, sandy regions.

*Rhampsinitus vittatus* n. sp.

(Text-fig. 70, a-e.)

*Colour*.—Dorsum of body with a light brown longitudinal band in the middle widening on the thoracic segments and forming a diamond-shaped patch on carapace; a sinuous white band on each side of median band reaching from posterior end of abdomen to anterior margin of carapace, on the whole a little narrower than the median band; laterally to these white bands the sides of the body from posterior end of abdomen to thoracic tergites brown, a little darker than the median band; sternites and genital operculum white, coxae light brown, mottled with white spots proximally; chelicerae with segment I blackish brown below, yellowish brown above, segment II light brown below, yellowish brown above, mottled with brown spots; pedipalp and legs light brown to yellow. Tergites each with a single transverse row of minute spines, those bordering the sides of the median band slightly larger; anterior margin of carapace (fig. 70, a) with no large spines projecting forwards beyond its edge, area between anterior margin of carapace and ocular tubercle smooth in the middle, 2 minute spines at the sides; antero-lateral angle of carapace with a group of 4-5 small spines, 1 small spine laterally to eye tubercle; ocular tubercle (fig. 70, a) with 3 moderate spines above; all coxae,

genital operculum, and sternites smooth; chelicerae as in fig. 70, *b*, seen from inner side (fig. 70, *c*, seen from outer side); segment I below (fig. 70, *d*) with a broad irregular strip of granules on each side, those of the outer side larger than those of the inner side, the strip tapering distally on both sides, a narrow area between them smooth; whole of dorsal surface except near the base granular; segment II with some weak granules basally on its anterior surface in the middle; pedipalp with femur (fig. 70, *e*) fairly densely covered with granules inferiorly, femur above, patella and tibia with a few weak granules, tarsus smooth. Legs: femora with the usual 5 rows of spine-like granules, 3 above and 2 below, femur I with a sixth accessory row in proximal

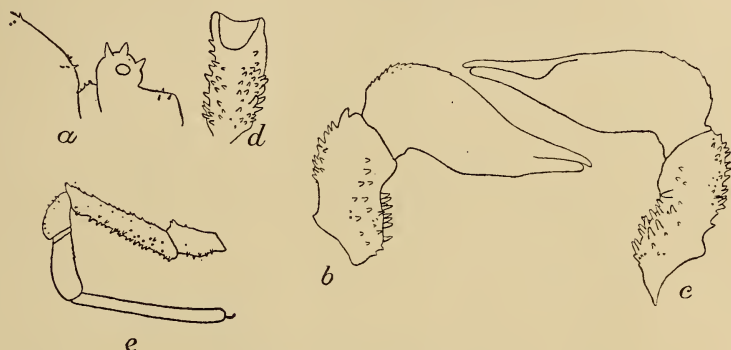


FIG. 70.—*Rhampsinitus vittatus*. ♂; *a*, ocular tubercle; *b*, chelicera from under side; *c*, chelicera from outer side; *d*, segment I of chelicera below; *e*, palp.

half between the dorso-lateral and infero-lateral rows only on the outer side; patellae with a few rows of minute spines, tibiae quite smooth except for 2 inferior rows of minute spines in I; tarsal segments 42 : 73 : 43 : 47.

*Measurements*.—Length of body 5·5, breadth 3·7, pedipalps 6·2, chelicerae I+II, 2·2+3·7 mm.

*Types*, 2 ♂♂, Sir Lowry's Pass, Hottentots Holland Mountains, Caledon, Cape Province. This species is related to *capensis* and *littoralis*.

*Rhampsinitus longipalpis* n. sp.

(Text-fig. 71, *a-b*.)

♂. *Colour*.—Dorsum of body uniform dark brown, the spines black, ocular tubercle and sides of carapace light brown; ventral surface dirty white, coxae light brown with some ivory white stripes in the

middle ; chelicerae light brown, a little darker near the base of segment I, pedipalp yellowish brown, legs blackish brown. lighter distally.

Tergites of abdomen (fig. 71, *a*) irregularly and fairly densely covered with triangular spines, the longest of these a little shorter than those on the ocular tubercle, not arranged in transverse rows and with no indication of grooves dividing the tergites ; the spines in the middle a little larger than those of the sides ; carapace with scattered spines fewer and smaller than those on the tergites, 1 larger

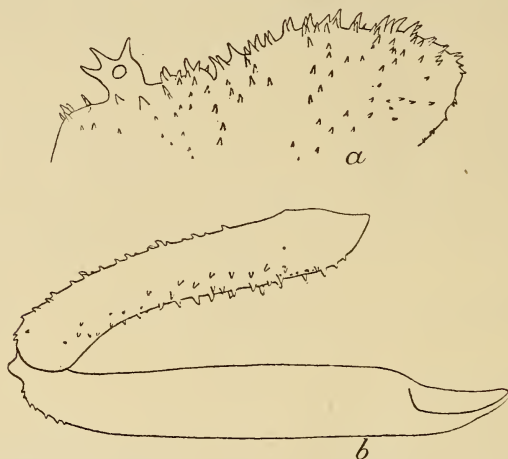


FIG. 71.—*Rhampsinitus longipalpis*. ♂: *a*, body from the side ; *b*, chelicera from inner side.

spine at the side of ocular tubercle opposite the eye ; anterior margin of carapace in front of ocular tubercle with 3 small spines, the middle one smaller than the lateral ones, behind each of the latter 1 small spine situated more mesially ; antero-lateral angles of carapace with a group of 4-5 small spines ; coxa I below with a few small granules, remaining coxae with ventral surfaces smooth ; chelicerae as in fig. 71, *b*, seen from inner side, segment I with the spines of the upper surface more numerous than those of the under surface, the sides smooth ; segment II anteriorly at the base with some small spines, otherwise smooth ; pedipalp much longer than body or chelicerae, about 4 times the length of body and 2 times the length of chelicerae, femur below with a few minute granules tipped with short setae, otherwise quite smooth. Legs very long, especially II, which is nearly 12 times length of body ; femora with the usual 5 rows of



short spines, no accessory rows present, tibiae smooth except in I, which has 2 inferior rows of minute granules, patellae with some irregular rows of minute spicules; femur II the longest, III the shortest, thus: II, IV, I, III; tarsal segments 47:86:44:48-50.

*Measurements*.—Length of body 6·3, breadth 4·6, chelicerae I+II = 5·7 + 7·4, pedipalp (femur + pat. tibia + tarsus) = 10 + 9 + 7·2 = 26·2 mm.

♀. *Colour*.—Abdomen above with a black marking in the middle, pointed at the sides in tergite II, then slightly constricted and parallel sided in remaining tergites, this marking not continued anteriorly on thoracic tergites; sides of abdomen light brown, carapace light brown variegated with black spots and stripes, otherwise as in ♂; spination in general as in ♂, thoracic segments with an irregular transverse row of spines, a similar row behind ocular tubercle; anterior margin of carapace with 1 small spine in the middle; ocular tubercle above with 4 spines on the one side, 3 on the other; chelicerae much smaller than in ♂, smooth; pedipalps much smaller than in ♂, smooth except for some minute granules on ventral surface of femur and dorsal surface of patella; legs very long, especially II, spines of femora much smaller than in ♂, absent on remaining segments.

*Measurements*.—Length of body 7, breadth 4·3, chelicerae 3·6, palp 6·3; leg II, 72 mm.

Types, 4 ♂♂, 1 ♀, East London, Cape Province.

*Rhampsinitus unicolor* n. sp.

(Text-fig. 72, a-c.)

*Colour* a uniform rich deep brown, femora of legs a little darker. Abdomen with a single transverse row of minute spines in each tergite somewhat irregular and interrupted; thoracic tergite I with a transverse row of small spines only in the middle, thoracic tergite II with a complete transverse row of small spines, both these rows regular and not interrupted; anterior margin of carapace with a minute spine in the middle, 2 spines a little farther back at each side, a few scattered spines on carapace at the sides of ocular tubercle; ocular tubercle with 3 spines above on each side, 1 small spine anteriorly at its base (fig. 72, b); inferior surfaces of coxae I and II with a few minute granules, those of II barely perceptible, remaining coxae, sternites, and genital operculum smooth; chelicerae (fig. 72, a): inferior surface



of segment I with an irregular interrupted row of spines on each side, smooth in the middle; dorsal surface sparsely but uniformly covered

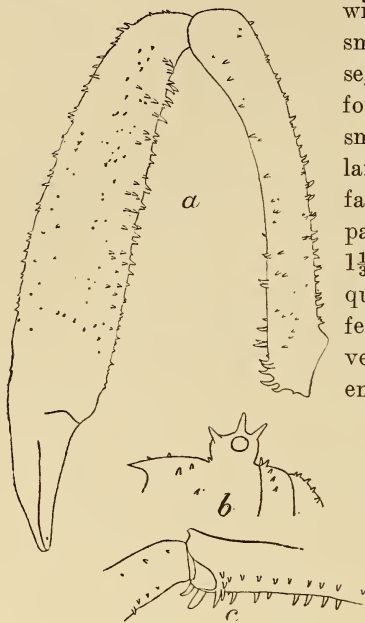


FIG. 72.—*Rhampsinitus unicolor*. a, chelicera; b, ocular tubercle; c, apex of femur of leg I.

with small spines, these distinctly smaller than those of ventral surface; segment II with dorsal surface uniformly but sparsely covered with small spines, those situated proximally larger than the distal ones, ventral surface similar, the sides smooth; pedipalp long, 3–4 times as long as body,  $1\frac{1}{2}$  as long as chelicerae, very slender, quite smooth. Legs long and slender, femora with the usual 5 rows of spines, ventral surface of femur I with 2–3 enlarged spines at its inner apex (fig. 72, c); patella I with 5 rows of minute spines, tibia I with 2 inferior rows, remaining patellae and tibiae smooth; tarsal segments 44 : 67 : 43 : 48.

*Measurements*.—Length of body 6·3, breadth 4·2, chelicerae I+II, 7+9, pedipalp (femur+pat. tibia + tarsus)=8·5+6+7·8=22·3; leg II, 72 mm.

Type, 1 ♂, Shiliowane, near Leydsdorp, Transvaal.

*Rhampsinitus flavidus* n. sp.

(Text-fig. 73, a–d.)

*Colour*.—Dorsal and ventral surfaces of body a uniform clay yellow with a few black spots, all spines tipped with black; chelicerae light brown, segment I a little darker at its apex; pedipalp with whole of femur, except at distal and proximal apices and tarsus, black, remainder yellow; legs light brown, a little darker than body, tarsi blackish; this coloration may be due to prolonged immersion in alcohol; abdominal and thoracic tergites with regular transverse rows of small spines; carapace at sides of ocular tubercle with 1 fairly large spine opposite the eye; between anterior margin of carapace and ocular tubercle a group of 12–15 small spines not arranged in rows, anterior margin of carapace at the sides with a row of 4 small spines; ocular

tubercle as in fig. 73, *a*, with 4 spines above; coxae, sternites, genital operculum smooth. Chelicerae as in fig. 73, *b*, seen from outer side (fig. 73, *c*, seen from inner side); outer side of segment I with some fairly long curved spines at its base below, above with some shorter ones, outer side between the upper and lower spines smooth; whole of inner side with irregular sparse short spines; segment II smooth on the outer side, inner side with some minute black spicules at its base; pedipalps smooth. Legs: femur I with the usual 5 rows of spines,

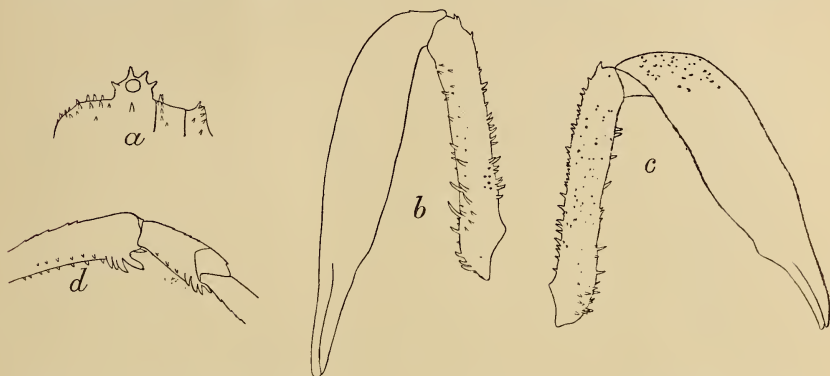


FIG. 73.—*Rhampsinitus flavidus*. ♂: *a*, ocular tubercle; *b*, chelicera from outer side; *c*, chelicera from inner side; *d*, femur-patella of leg I.

below at apex with some enlarged spines on inner side as in fig. 73, *d*, patella with 2 rows of spines below ending apically in 2-3 larger spines, smooth above; tibia with 2 rows of minute spines below (much smaller than those of femur and patella), quite smooth above; remaining femora spined but without enlarged apical spines, patellae and tibiae smooth; tarsal segments 39:68:38:46.

*Measurements*.—Length of body 4.6, breadth 3, chelicerae I+II, 4+5, pedipalp (femur+pat. tibia+tarsus)=4.3+3+4.3; leg II, 34 mm.

Type, 1 ♂, Makoetsi, near Leydsdorp, Transvaal. Type in Transvaal Museum.

*Rhampsinitus levis* n. sp.

(Text-fig. 74, *a-d*.)

♂. *Colour* almost uniform pale yellow, probably due to prolonged immersion in alcohol; abdomen with a median dark greyish coloured band almost parallel sided, the lateral borders crenulated; carapace coloured similarly to median abdominal band except dorsal surface

of ocular tubercle and a triangular marking just posterior to it which are pale yellow, carapace streaked with chocolate-brown stripes and spots; ventral surface of abdomen pale, coxae in proximal half ivory white, in distal half greyish; chelicerae with some brownish infuscation on their inner sides, segment II with some brown spots on inner side; pedipalp pale yellow; legs almost uniform pale yellow, tibiae and patellae infuscated brown; abdominal tergites



FIG. 74.—*Rhapsinitus levis*. ♂: a, ocular tubercle; b, chelicera from outer side; c, chelicera from inner side; d, palp.

entirely smooth without rows of granules, first thoracic tergite with a row of 2-4 short spines; anterior edge of carapace with 3 short blunt spines, the middle one considerably larger and stouter than the lateral ones, behind each of the lateral spines a larger spine, behind the middle spine on anterior margin of carapace and about half-way between this and ocular tubercle 2 small spines; antero-lateral angles of carapace with 1 small spine, a few small spines at the sides of the ocular tubercle; ocular tubercle as in fig. 74, a, with 4 pairs of short blunt spines and in addition a few spicules; distal edge of coxae above with 1 upwardly directed spine, inferior surfaces of coxae, sternites, and genital operculum entirely smooth. Chelicerae as in fig. 74, c, seen from inner side (fig. 74, b, seen from outer side); segment I with some spine-like granules in distal half above, below with some

slenderer spines on each side, those on the inner side more numerous, inferior surface between them smooth, sides smooth; segment II entirely smooth; pedipalp as in fig. 74, *d*, tarsus with under surface covered with fine minute spicules. Legs: femur I with 5 rows of small spines, patella with some rows of minute spines, tibia with none, femur with no enlarged spines below at inner apex; femora of remaining legs with smaller spines, the distal segments with none; tarsal segments 38 : 64 : 36 : 38.

*Measurements*.—Length of body 4·7, breadth 3, chelicerae I+II, 2+2·9, pedipalp 4·5 mm.

♀. *Colour* similar to ♂ but darker and more distinct, median band on dorsal surface of abdomen chocolate brown; chelicerae more or less infuscated, segment II more so than I; pedipalp with distal half of femur of pedipalp, patella, and proximal half of tibia infuscated brown; legs chocolate-brown, femora lighter below, tibiae with an apical and basal light band, the basal band narrower than the apical one, tarsi light; dorsum of body armed as in ♂, the lateral spines on the anterior edge of carapace not much smaller than the middle one; chelicerae with a few granules on the dorsal surface of segment I, none on inferior surface, segment II smooth; pedipalp less strongly armed than in ♂, femur with some granules below; femora of legs with weaker spines than in ♂; tarsal segments 36 : 63 : 33 : 40.

*Measurements*.—Length of body 6·1, breadth 3·3, chelicerae I+II, 2·9, pedipalp 4·3 mm.

In fresh female specimens the colour of body is in general a dark chocolate brown above, the median band darkest, the sides mottled, under surface dirty yellow.

Types, 1 ♂, 4 ♀♀, 3 juveniles, Kalk Bay, Cape Peninsula. Other localities: Simonstown; Newlands; Nordhoek; St. James; Grottoes, Table Mountain; Rosebank; Skeleton Gorge, Table Mountain, all Cape Peninsula.

*Rhampsinitus cristatus* n. sp.

(Text-fig. 75, *a-f*.)

♂. *Colour* of dorsum mottled grey brown, a broad median brown abdominal band with slightly crenulate sides, itself divided in the middle by a lighter longitudinal stripe; spines of dorsum white, tipped with black; sternites dirty white mottled with brown, coxae dirty white in proximal half, brown in distal half; chelicerae yellow with reddish-brown stripes, segment II with reddish-brown spots



anteriorly and at the sides; pedipalp whitish, femur and patella with some brown stripes; legs yellow, femora, patellae, and tibiae with some brown infuscated stripes. Body thickly covered with spines forming irregular transverse rows on the thoracic and abdominal tergites; these spines of two types, those in the middle large, their sides with a varying number of small black spicules (fig. 75, e), their tips bifid or trifid, the spines at the sides of the body consisting of low conical tubercles surrounded at their bases with a ring of small black

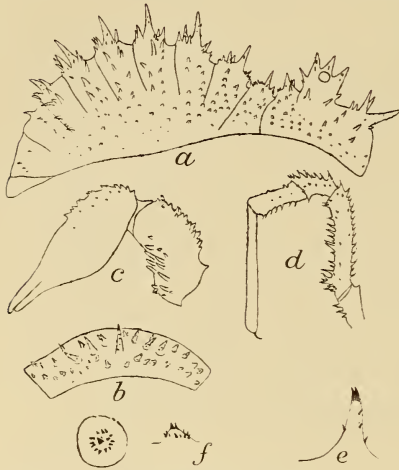


FIG. 75.—*Rhampsinitus cristatus*. ♂: a, body from the side; b, III abdominal tergite above; c, chelicera; d, palp; e, long median spine; f, short lateral spine from above and from the side.

spicules, these tubercles tipped at their apices with 1 or 2 spicules (fig. 75, f); the largest spines in the middle of the body larger than those on the dorsal surface of ocular tubercle, those at the sides of the body considerably smaller than the spines of the ocular tubercle; anterior margin of carapace in front of ocular tubercle with 3 enlarged spines, the median and largest projecting forwards and a little upwards, the 2 lateral ones pointing more directly upwards; carapace thickly covered with smaller spines (fig. 75, a); ocular tubercle above with 4 pairs of spines all with accessory spicules, the most posterior pair

the smallest; thoracic and abdominal tergites with 2 irregular rows of spines; 1 spine in the middle of each tergite distinctly enlarged, forming a median crest (fig. 75, a), this spine seen from above (fig. 75, b) placed between the 2 irregular rows of spines; sternites smooth, all coxae strongly granular; chelicerae spined as in fig. 75, c, segment I with a number of ventral spines on the outer side, those on the inner side similar but fewer in number; pedipalp spined as in fig. 75, d. Legs: femora provided with 5 rows of strong tooth-like black-tipped spines, those of the median dorsal row longer than the others, patellae spined, tibiae without spines but with 2 ventral rows of minute black spicules, leg I not incrassate; tarsal segments 35:69:33:39.

*Measurements*.—Length of body 5.6, breadth 3.7, pedipalp 5, chelicerae I+II, 1.7+3; leg I, 17 mm.



♀. Resembles ♂ in all respects except the following: the median brown band on dorsum of abdomen a little more distinctly defined; the chelicerae considerably smaller than in the ♂, segment I unspined below, above a few small teeth, segment II smooth; the pedipalp appears to be even more strongly spined than in the ♂.

*Measurement* of largest ♀ 7·8 mm. in length, chelicerae I+II, 1+2 mm.

Types, 3 ♂♂, 6 ♀♀, 4000 feet altitude, Great Winterhoek Mountains, Tulbagh, Cape Province.

*Rhampsinitus silvaticus* n. sp.

(Text-fig. 76, *a-b*.)

♂. *Colour*.—Dorsum blackish, sternites dirty white with some broken brown transverse stripes, coxae whitish, brown at their distal apices; segment I of chelicerae yellow brown, segment II speckled brown at the sides basally, a round black dot in the middle anteriorly; pedipalp whitish with black infuscation at the bases of the patella, tibia, and tarsus; legs uniform black; spines of dorsum of body and ocular tubercle yellow, tipped with black. Integument finely granular, abdominal and thoracic tergites each with a single transverse row of small spines (much smaller than those of the ocular tubercle); first thoracic segment with only 2 or 3 spines in the middle, transverse row of spines of first abdominal tergite interrupted in the middle, represented by 2 short oblique lateral rows of 2-3 spines a little larger than those of remaining tergites; ocular tubercle above with 3 short but sharp spines; no spines anterior to the ocular tubercle but 1 or 2 at the side near the lateral edge of the carapace; sternites and coxae entirely smooth; chelicerae short as in fig. 76, *a*, segment I spined above in distal  $\frac{2}{3}$ , outer ventral surface with enlarged and tooth-like spines forming an irregular row or rows, inner ventral surface with a few smaller spines; segment II anteriorly at its base with a few spicules, otherwise smooth; pedipalp as in fig. 76, *a*, the femur with a few small tubercles ventrally, tipped with short black setae, femur subequal to patella+tibia but shorter than tarsus. Legs long, smooth, and slender, the spines of femora so minute as to be invisible to the naked eye, only femur I perceptibly spined, remaining segments smooth, leg I not incrassate, leg II more than 10 times length of body.

*Measurements*.—Length of body 5·5, chelicerae I+II, 1·3+2·7, pedipalp 5·8; leg II, 63 mm.

♀. *Colour* differing markedly from that of ♂; dorsum dirty white,

the sides brown with a number of white spots each with a central black dot; a median marking as in fig. 76, *b*, which is black and strongly contrasting with the remainder of the dorsum, behind and laterally to the ocular tubercle a roughly triangular marking a little

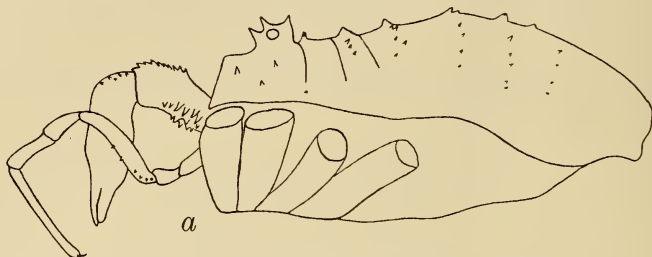
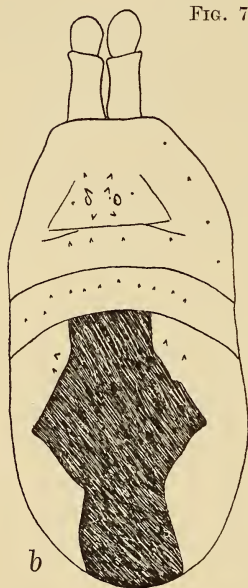


FIG. 76.—*Rhampsinitus silvaticus*. *a*, ♂ seen from the side; *b*, ♀ from above.



darker than the sides but lighter than the median marking; under surface as in ♂, dirty white, the coxae ringed with brown distally; femur of pedipalp with a black stripe in the middle on the outer side, tarsus infuscated black at its base; legs, except the second pair which are uniform light brown, not uniformly dark but banded; femora I, III, and IV with a fairly narrow blackish band near their distal apices, the apices themselves with a white band narrower than the blackish band; tibiae with a blackish band in the middle broader than that of the femora, patellae infuscated with brown stripes at the sides, metatarsi and tarsi more or less indistinctly banded with brown. Chelicerae normal, unspined; femur of pedipalp with a few

minute granules below; I and II thoracic tergites with a transverse row of small whitish spines, abdominal tergite I with a short lateral row of 2 spines on each side, remaining tergites with very small or no spines; legs unarmed except femora, which have rows of minute fine spicules; tarsal segments 46 : 59 : 46 : 54.

*Measurements*.—Length of body 6.7, chelicerae I+II, 3; leg I, 32 mm.

*Types* 2 ♂♂, 3 ♀♀, Knysna Forest. Other specimens: 1 ♀, Cold-

stream, Humansdorp. This species is distinguished from most other species by the marked difference in colour of ♂ and ♀; the chelicerae in the ♂ are not much larger than those of the ♀; the legs are remarkably smooth and very long and slender; the species is probably localised in the forested area of the Knysna district.

*Rhampsinitus transvaalicus* n. sp.

(Text-fig. 77.)

Closely resembling *R. leighi* (Pocock, Proc. Zool. Soc., 1902, pt. 2, p. 396), differing from it chiefly in the shorter chelicerae.

Colour as in *leighi*, a uniform dark blackish brown, coxae in proximal half sometimes a little lighter, legs uniform black; ocular tubercle



FIG. 77.—*Rhampsinitus transvaalicus*. ♂: body and palp seen from the side.

with 3 dorsal spines, armature of dorsum as in *leighi*; chelicerae differing from *leighi* in being shorter, the sum of the two segments a little greater than the body length (the males here, however, probably not full grown); under surface of segment I on the outer side with a fairly regular row of about 11 strong curved teeth, these considerably larger than any other teeth found on the chelicerae (fig. 77); anterior surface of segment II with a number of small teeth and spicules not reaching as far distally as in *leighi*; coxa I with a few small granules, remaining coxae smooth; pedipalp as in *leighi*, femur equal in length to patella+tibia, shorter than tarsus, unspined. Legs: femur I with 5 rows of tooth-like spines, the 2 ventral rows largest, patella similar, tibia with 2 ventral rows of minute setiform spines, femur below at inner apex with 3-4 enlarged teeth, patella below with 2 rows of fairly large teeth, the 2-3 apical ones on each side enlarged; femora of remaining legs with weaker spines than in I, remaining segments unspined.

*Measurements*.—Length of body 5, chelicerae I+II, 2·6+3·4, pedipalp 5·5; leg I, 28; II, 49 mm.

♀. *Colour*.—Sternites lighter than in ♂, white infuscated with brown and with transverse rows of blackish spots; coxae in proximal half a little lighter than in distal half; body larger than in ♂, chelicerae shorter, without teeth or granules, some black bristles near the apex of segment II; femora of legs with distinctly weaker spines than in ♂; tarsal segments 38:62:39:43.

*Measurements*.—Length of body 7·7, chelicerae I+II, 1·6+2·6, pedipalp 5·8 mm.

Types, 1 ♂, 1 ♀, 4 juvenile ♂♂, Zoutpansberg, near Louis Trichardt, Transvaal.

*Rhampsinitus lalandei* Simon.

(Text-fig. 78.)

1879. Simon, Ann. Soc. Ent. Belgique, xxii, p. 72.

1923. Roewer, Die Weberknechte der Erde, p. 785, fig. 958.

The following is Roewer's amended description of the type:—

*Colour* of body reddish brown; appendages blackish except fingers of chelicerae and terminal segment of legs I and II which are light red.

Body convex above, obtusely truncate posteriorly; carapace with

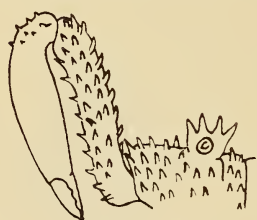


FIG. 78.—*Rhampsinitus lalandei* Simon. ♂: ocular tubercle and chelicera from the side (copied from Roewer).

ocular tubercle (4 spines on each side above)

and chelicerae of ♂ as in fig. 78; thoracic

tergites I and II and all abdominal ter-

gites thickly, coarsely, and irregularly

spined; all free sternites smooth; surfaces

of coxae I-IV roughly granular; chelicerae

of ♀ normal, segment I toothed above;

pedipalp of ♂ slender and very long:

femur-tibia cylindrical and slender; pa-

tella anteriorly in the middle without an

apophysis; femur all over and patella

above roughly and irregularly toothed;

tibia and tarsus unarmed, tarsus, however, with a row of small

granules below; pedipalp of ♀ normal, femur and patella more or

less toothed. Legs powerful; trochanters I-IV toothed on each

side; femora I-IV more or less angular, the edges each with 1 row of

sharp teeth: patellae I-IV slightly angular and with weaker teeth;

tibia I-IV not angled but somewhat compressed laterally and with

some very weak rows of teeth. Secondary sexual characters of ♂

present in chelicerae and pedipalp.



*Measurements*.—Length of body 6·5, pedipalp of ♂ 12, chelicera of ♂ 7+7·8, femora I–IV, 12 : 17 : 9 : 13 ; legs I–IV, 44 : 72 : 39 : 56.

Types, several examples (♂ and ♀) from “Cafrerie.” Type in Paris Museum. The South African Museum does not possess representatives of this species.

*Rhampsinitus crassus* Loman.

(Text-fig. 79.)

1898. Loman, Zool. Jahrb. Syst., ii, p. 520.

1903. *R. leppanae* Pocock, Proc. Zool. Soc. (1902), pt. 2, p. 392.

1923. Roewer, Die Weberknechte der Erde, p. 789, fig. 964.

The following is Roewer’s amended description of the type :—

*Colour* of body light brown above, sprinkled with blackish dots between the pale yellow black-tipped spines ; a well-defined dark brown median marking usually divided in the middle by a pale yellow longitudinal stripe ; abdomen above on each side of the median marking with scattered black, white-encircled dots ; abdomen below greyish white, coxae I–IV similar ; chelicera and pedipalp rich brown more or less mottled dark brown ; legs brown with darker stripes.

Body convex above, rounded posteriorly ; carapace in front of ocular tubercle with 3 rows of teeth, ocular tubercle above with 4 short teeth on each side, otherwise as in fig. 79 ; thoracic tergites I and II each with 1 transverse row of small teeth ; all free sternites smooth ; surfaces of coxae I–IV thickly and irregularly granular ; chelicera of ♀ small, nor-

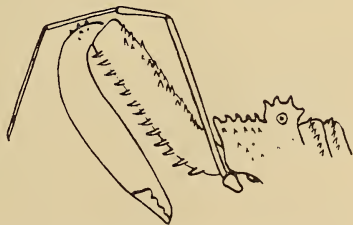


FIG. 79.—*Rhampsinitus crassus* Loman. ♂ : ocular tubercle, chelicera, and palp seen from the side (copied from Roewer).

mal segment I granular above, that of ♂ as in fig. 79, in addition, segment I below on the inner side with a complete row of teeth ; pedipalp of ♀ short, that of ♂ as in fig. 79 ; legs powerful, trochanters I–IV toothed on each side ; femora I–IV edged and at each edge a row of teeth ; tibiae and patellae I–IV angled but unarmed ; secondary sexual characters of ♂ present in chelicerae and pedipalp as well as in leg I, in which the femur is more or less thickened distally and (especially ventrally) strongly toothed ; tibia incrassate, it and the slender metatarsus sparsely toothed below.

*Measurements* of ♂.—Length of body 7, chelicerae I+II, 4·5+5·5,



pedipalp 14, femora I-IV, 4.5 : 7 : 4 : 4.5 ; legs I-IV, 23 : 45 : 19 : 27 mm.

♀. Length of body 8, chelicerae 4, pedipalp 7.5, femora I-IV, 4 : 7 : 4 : 5 ; legs I-IV, 20 : 35 : 19 : 28 mm.

Types from Port Elizabeth, in Lubeck Museum. Other localities : Johannesburg ; Teafountain, Grahamstown.

The South African Museum has about 38 specimens of both sexes from the following localities : Willomore, Montagu, Port Elizabeth, Addo Bush, Cogmanskloof (Ashton), Matjesfontein, Prince Albert, Dunbrody (Uitenhage Division), all middle Cape Province. The Albany Museum has specimens from Steytleville and East London. Throughout this series only the first and second coxae at most are granular, generally only the first and then not very strongly so, the third and fourth are always smooth and not, as in the description quoted by Roewer, "*dicht und regellos bekornt*"; one male from Port Elizabeth has on the ocular tubercle 6 spines at the one side, 5 at the other, the specimens from Montagu, Matjesfontein, and Ashton have generally 3 spines on each side.

*Rhampsinitus minor* Loman.

(Text-fig. 80.)

1898. Loman, Zool. Jahrb. Syst., ii, p. 519.

1923. Roewer, Die Weberknechte der Erde, p. 790, fig. 965.

The following is Roewer's amended description of the type :—

*Colour* of body dark brown above, the dorsal spines almost black ; ventral surface of abdomen and coxae I-IV light brown ; appendages

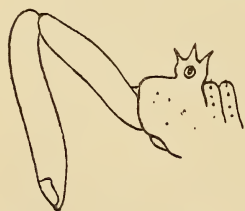


FIG. 80.—*Rhampsinitus minor* Loman. ♂: ocular tubercle and chelicera from the side (copied from Roewer).

a uniform yellow brown. Body convex above, posteriorly rounded ; carapace and ocular tubercle (above with 3 spines on each side) as in fig. 80 ; thoracic tergites I and II and all abdominal tergites with each 1 transverse row of small spines ; all free sternites and surfaces of coxae I-IV smooth ; chelicera of ♀ small, normal, smooth, that of ♂ as in fig. 80 ; pedipalp of ♀ and ♂ small, normal, the femur only sparsely toothed below ; legs powerful, femora I-IV angular, the edges (especially in III and IV femora)

with 1 row of teeth ; tibia I-IV weakly angled and sparsely toothed ; secondary sexual characters of ♂ present in chelicera.

*Measurements*.—Length of body 6, chelicerae 2+2·5, pedipalp 5·5, femora I–IV, 4 : 8 : 4 : 4·5 ; legs I–IV, 20 : 53 : 18·5 : 28.

Types, ♂ and ♀ from Illovo, Verulam, Natal ; in Amsterdam Museum. The South African Museum has no representatives of this species.

*Rhampsinitus telifrons* Pocock.

(Text-fig. 81.)

1903. Pocock, Proc. Zool. Soc. (1902), pt. 2, p. 395.

1923. Roewer, Die Weberknechte der Erde, p. 790, fig. 966.

The following is Roewer's amended description of the cotype :—

*Colour* of body yellow brown ; carapace and abdomen on each side speckled with brown, an ill-defined dark brown median band lighter and more or less obliterated in the middle ; appendages light reddish yellow ; femora–tibia infuscated with brown.

Body convex above and bluntly truncate posteriorly ; carapace and ocular tubercle (the latter with 5 teeth on each side above) as in fig. 81, thoracic tergites I and II and all abdominal tergites with 1 transverse row of spines ; all free sternites and surfaces of coxae III and IV smooth, coxae I and II roughly granular ; chelicera as in fig. 81 ; pedipalp short, normal, trochanter and femur ventrally sparsely toothed ; legs powerful, trochanters I–IV toothed on each side, femora–tibiae I–IV angular and femora only with a row of teeth along the edges ; secondary sexual characters of ♂ present in chelicerae.



FIG. 81.—*Rhampsinitus telifrons* Pocock. ♂ : ocular tubercle and chelicera seen from the side (copied from Roewer).

*Measurements*.—Length of body 8, chelicera 3·5+4, pedipalp 6, femora I–IV, 4 : 7·5 : 4 : 6·6 ; legs I–IV, 21 : 38 : 19 : 27.

Type, 1 ♂ from Jansenville, Cape Province. Type in British Museum. The South African Museum possesses no representatives of this species.

*Rhampsinitus leighi* Pocock.

(Text-fig. 82.)

1903. Pocock, Proc. Zool. Soc. (1902), pt. 2, p. 396.

1923. Roewer, Die Weberknechte der Erde, p. 791, fig. 967.

The following is Roewer's amended description of the cotype :—

*Colour* of body above blackish brown, the free sternites lighter,

these in the ♀ yellowish white; coxae I-IV dark brown; appendages a uniform blackish brown.

Body convex above and bluntly truncate posteriorly; carapace and ocular tubercle (the latter above with 3 spines on each side) as in fig. 82;

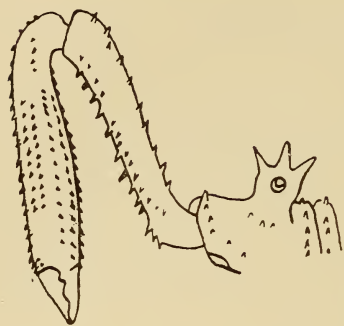


FIG. 82.—*Rhampsinitus leighi* Pocock. ♂: ocular tubercle and chelicera seen from the side (copied from Roewer).

thoracic tergites I and II and all abdominal tergites with 1 transverse row of spines; all free sternites and surfaces of coxae III and IV smooth, coxae I and II roughly granular; chelicerae of ♀ small, normal, segment I above more or less granular, that of ♂ as in fig. 82; pedipalp of ♂ and ♀ similar, normal, unarmed; legs powerful, femora-tibiae I-IV angular, femora I-IV only with a row of teeth along the edges; secondary sexual characters of ♂ present in chelicerae.

*Measurements.*—Length of body 6-8; chelicerae of ♂ 4-6+6-9, pedipalp 7, femora I-IV, 12:17:9:13; legs I-IV, 45:74:41:58.

Types, ♂ and ♀ from Durban, Natal. Types in British Museum. The South African Museum has this species from Stella Bush, Durban; Krantzklouf, Natal; Kentani; Umtata. The Natal Museum has it from Ifafa, Natal.

This species is easily distinguished by the almost uniformly dark coloration of the male and the strongly contrasting colours of the female, in which the ventral surface is a brilliant ivory white; the legs are very long and slender; the chelicerae in the males are longer than in any other South African species but vary considerably; in the South African Museum specimens they are 2-3 times the body length, in one specimen in the collection of the Natal Museum they are almost 4 times the body length.

*Rhampsinitus spenceri* Pocock.

(Text-fig. 83.)

1903. Pocock, Proc. Zool. Soc. (1902), pt. 2, p. 394.

1923. Roewer, Die Weberknechte der Erde, p. 791, fig. 968.

The following is Roewer's amended description of the cotype:—

*Colour* of body above greyish yellow with a lighter more or less dark infuscated median longitudinal band, a saddle-shaped marking behind

the ocular tubercle only weakly indicated ; ventral surface of abdomen and coxae I-IV ash grey more or less speckled with brown ; chelicera and pedipalp light yellow more or less speckled with brown ; legs yellow brown, metatarsi and tarsi I-IV darker ; all spines of the body and appendages light yellow minutely tipped with black. Body convex above, rounded posteriorly ; carapace : anterior margin with 1 tooth in the middle, ocular tubercle above with 4 teeth on each side, otherwise as in fig. 83 ; thoracic tergites I and II and abdominal tergites I-IV each with 1 transverse row of small spines ; remaining tergites, all free sternites, and surfaces of coxae III and IV smooth ; coxae I and II roughly granular ; chelicera of ♀ small, normal, that of ♂ as in fig. 83 ; pedipalp of ♀ short, normal, that of ♂ long, thin, and unarmed ; legs slender, trochanters I-IV on each side more or less toothed, femora-tibiae angled, femur at the edges with a powerful row of teeth, patella similarly but sparsely toothed ; secondary sexual characters of ♂ present in chelicera and pedipalp.

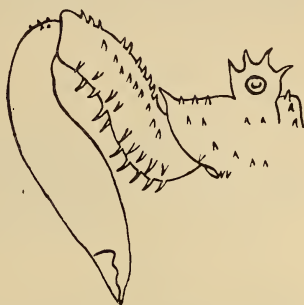


FIG. 83.—*Rhampsinitus spenceri* Pocock. ♂: ocular tubercle and chelicera from the side (copied from Roewer).

*Measurements* of ♂.—Length of body 6.5, chelicera 4.2+4.7, pedipalp 13 ; legs I-IV, 19 : 29 : 18 : 29.

Types, ♂ and ♀ from Natal (exact locality unknown). Types in British Museum. The South African Museum does not possess representatives of this species.

*Rhampsinitus hispidus* Roewer.

(Text-fig. 84.)

1911. Roewer, Arch. Naturg., lxxvii, Suppl. 2, p. 92.

1923. Roewer, Die Weberknechte der Erde, p. 792, fig. 969.

*Colour* of body above rich leather brown, a dark median band weakly defined in the anterior part of abdomen in the ♂, more distinct in the ♀, constricted on the first abdominal tergite where it is bordered by a light patch on each side, broadening again on the second tergite and from here to the operculum anale parallel sided ; abdomen below and coxae I-IV greyish white, speckled with light brown ; appendages uniformly reddish yellow.



Appearance and armature of body, ocular tubercle (the latter with 3 spines above on each side) as in fig. 84; surface of carapace anterior to the ocular tubercle smooth in the middle but anterior margin with 1 forwardly projecting spine in the middle; chelicera of ♀ small, normal, that of ♂ long and slender, fig. 84; legs powerful, trochanters I-IV

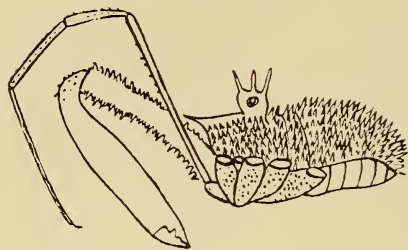


FIG. 84.—*Rhampsinitus hispidus* Roewer.  
♂: ocular tubercle, palp, and chelicera from the side (copied from Roewer).

encircled with spines; femora I-IV angled and at the edges with 1 row of teeth; patellae I-IV with 3 dorsal rows of teeth, ventral surfaces smooth; tibia II practically smooth, tibiae III and IV each with 5 indistinct rows of minute teeth; secondary sexual characters of ♂ present in chelicera, pedipalp, and leg I; femur I more or less incrassate and bent a little forwards, tibia smooth above, below with sharp teeth.

*Measurements of ♂*.—Length of body 7, chelicera 6+8, pedipalp 19, femora I-IV, 7:12:7:8; legs I-IV, 28:43:28:33.

♀. Length of body 9, chelicera 4, pedipalp 10, femora I-IV, 7:13:7:10; legs I-IV, 30:57:30:43.

Types from Port Elizabeth, ♂ and ♀. Types in Hamburg Museum.

The South African Museum has specimens from Blue Cliff, Uitenhage; the Albany Museum, Grahamstown, has it from Alicedale, Port Alfred, Grahamstown.

*Rhampsinitus echinodorsum* Roewer.

(Text fig. 85.)

1912. Roewer, Abh. Ver. Hamburg, xx, fasc. 1, p. 163.

1923. Roewer, Die Weberknechte der Erde, p. 792, fig. 970.

*Colour* of body dark brown above; carapace on each side with lighter spots; ocular tubercle light yellow; abdomen anteriorly on each side somewhat lighter brown so that anteriorly traces of a dark brown median saddle-shaped marking appear; all free sternites greyish white sometimes narrowly bordered with dark brown; coxae I-IV dark brown, especially anteriorly; chelicera shining blackish brown; pedipalp dark brown except femur-tibia apically and whole of tarsus which are yellowish white; legs dark brown except the



yellowish-white black-tipped teeth; femora I-IV at their bases with lighter joints; tibiae in their basal halves as well as metatarsi and tarsi I-IV lighter.

Body above convex, posteriorly rounded; carapace and ocular tubercle (the latter with 3 spines on each side above) as in fig. 85; thoracic tergites I and II and all abdominal tergites very closely and thickly provided with strong irregularly placed spines; all free sternites smooth; surfaces of coxae I-IV roughly granular; chelicera and pedipalp of ♂ as in fig. 85; legs slender, trochanters I-IV strongly toothed on each side; femora-tibiae I-IV angles and the edges each with a row of teeth; secondary sexual characters of ♂ present in chelicera, pedipalp, and leg I; femur I somewhat stouter than the rest.

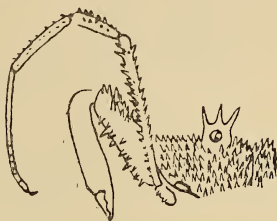


FIG. 85.—*Rhampsinitus echinodorsum* Roewer. ♂: ocular tubercle, palp, and chelicera from the side. (Copied from Roewer.)

*Measurements*.—Length of body, 5.5, chelicerae 2+2.5, pedipalp 7, femora I-IV, 5 : 9 : 5.5 : 7.5; legs I-IV, 21 : 33 : 21 : 30.

Type, 1 ♂ from Windhoek, South West Africa. Type in the collection of Dr. Roewer. This species is not represented in the collection of the South African Museum.

*Rhampsinitus granarius* Roewer.

(Text -fig. 86.)

1916. Roewer, Arch. Naturg., lxxxii, A, fasc. 2, p. 154, t. 44.

1923. Roewer, Die Weberknechte der Erde, p. 793, fig. 972.

*Colour* of body greyish to reddish yellow; carapace and abdomen on each side above speckled blackish; coxae I-IV minutely speckled with brown on each side; chelicera and pedipalp reddish yellow; legs reddish yellow except femora I-IV apically and patellae I-IV which are infuscated a little darker brown. Body convex above, closely and minutely granular, rounded posteriorly; carapace and ocular tubercle (the latter with 4 teeth on each side above) as in fig. 86; thoracic tergites I and II and all abdominal tergites each with 1 transverse row of small spines; all free sternites smooth; surfaces of coxae I-IV irregularly granular; chelicerae from the outer side as in fig. 86, in addition segment I on the inner side below with a longitudinal row of 5-7 teeth in its basal  $\frac{2}{3}$ ; pedipalp as in fig. 86;

legs powerful, trochanters I-IV toothed on each side; femora-tibiae I-IV angled, femur and patella at the edges with a longitudinal row of teeth, tibia unspined; secondary sexual characters of ♂ present in the chelicerae, pedipalp, and leg I; femur I especially strongly toothed and curved forwards, somewhat incrassate apically (fig. 86).

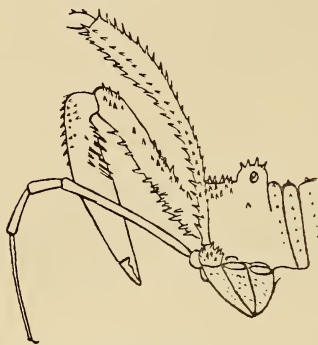


FIG. 86.—*Rhampsinitus granarius* Roewer. ♂: ocular tubercle, palp, chelicera, and femur seen from the side. (Copied from Roewer.)

*Measurements*.—Length of body 7, chelicera 3+4, pedipalp 7, femora I-IV, 5 : 6.5 : 4 : 5; legs I-IV, 19 : 31 : 19 : 23.

Type, 1 ♂ from Johannesburg, Transvaal. Type in the collection of Dr. Roewer. This species is not represented in the collection of the South African Museum.

## APPENDIX.

*Speleosiro argasiformis* n. sp.

(Text-fig. 87, a-c.)

1931. Roewer, Zeitschr. fur wissenschaftl. Zoologie, Bd. 138, p. 158, fig. 6.

The following is a description of the ♂.

*Colour*.—Body deep reddish brown, appendages light brown.

Tergites with granulation as in ♀, sternites as in ♀. Inferior surfaces of coxae with sparse fairly long golden brown hairs, these more dense at the margins of coxa I than on the remaining coxae.

Pedipalps and chelicerae as in ♀. Leg IV as in fig. 87, a, b, with two tarsal segments, the proximal of which is armed with a hooked process; second tarsal joint twice as long as the first or process-bearing joint (fig. 87, b), thereby differing from *Purcellia illustans* in which these joints are of equal length.

Arculi genitales distinct and prominently raised when seen from the side.

Corona analis as in fig. 87, c; anal operculum at each side with a row of 5-7 strong curved setae meeting in the middle line where two posteriorly converging keels are to be seen; seen from above and below abdomen slightly incised at its posterior apex in the middle line.

*Measurements*.—Length of body 4.7, breadth 3; 1 leg 7.5, chelicera; segment I, 2; segment II, 2.5 mm.

Two adult male specimens from the same locality as that in which the female types were found—Wynberg Caves, Table Mountain.

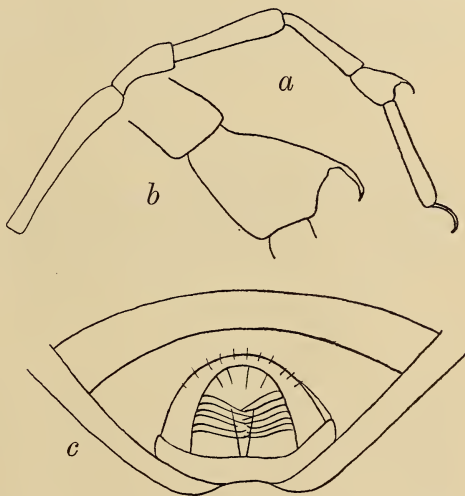


FIG. 87.—*Speleosiro argasiformis*. ♂: a, leg IV; b, first or process-bearing joint of tarsus enlarged; c, corona analis.

*Ceratontia cheliplus* Roewer.

(Text-fig. 88.)

1931. Roewer, Zeitschr. für wissenschaftl. Zoologie, Bd. 138, p. 158, fig. 6.

The following is a translation of Roewer's description.

*Dimensions*.—Length of body 3; legs I–IV, 4·5:7·2:5:6·8 mm.

Ocular tubercle directed forwards, terminating in a blunt point, granular. Anterior margin of carapace demarcated by a transverse furrow and provided on each side of the ocular tubercle with 3 forwardly directed teeth. Surface of carapace, scute, and free tergites of abdomen uniformly covered with fine and close granulation; areas I–V of dorsal scute clearly defined, and as in free tergites I–III provided with a transverse row of tubercles. Free sternites of abdomen each with a transverse row of granules; surfaces of coxae I–IV smooth matt without marginal rows of tubercles, anterior margin

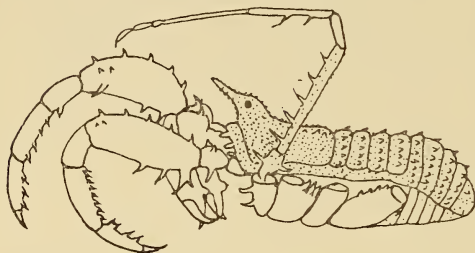


FIG. 88.—*Ceratontia cheliplus* Roewer. ♂: seen from the side.

of coxa I with 2 teeth, coxa II at its posterior apex and coxa IV at its anterior apex provided with a group of tubercles. Chelicerae: segment I with a distinct dorsal enlargement which bears 1 tooth on its distal third, otherwise unarmed; segment II provided anteriorly with some scattered granules and posteriorly

above the immovable claw with a thickened tubercle. Palps: trochanter above with 2, below with 1 tooth; femur above with a longitudinal row of 5 teeth, apically on each side of it some small scattered teeth, on its inner side apically with 1 tooth, below with 3 basal teeth, the one situated nearest the base bifid; patella to tarsus smooth above, patella on inner side with 1 tooth, tibia on inner side below with 4, on outer side below with 8 blunt teeth; tarsus below on each side with 3 blunt teeth, the basal one on the outer side unusually stout and incompletely bifid. Legs unarmed, sparsely granular as far as the tibia, trochanter I, however, with 2 teeth, femur I below with a longitudinal row of 5–6 teeth, and tibia I below with 2 teeth; tarsal segments 2:3:3:3; terminal section of tarsus I consisting of 1, II of 2 segments.

*Colour* of body and appendages reddish yellow, carapace, scute, and free tergites of abdomen with blackish reticulation.

Grahamstown, South Africa, 12 (♀, ♂). Collected by the Rev. R. Godfrey. Types in British Museum, London.

*Ceratontia irregularis*, I am certain, will have to be sunk in favour of *C. cheliplus*; in the former case the ♀ having been described, in the latter the ♂. Unfortunately I have not been able to compare the types.

*Ceratomontia wernerii* Roewer.

(Text-fig. 89.)

1931. Roewer, Zeitschr. fur wissenschaftl. Zoologie, Bd. 138, p. 159, fig. 7.

The following is a translation of Roewer's description.

*Dimensions*.—Length of body 3·5; legs I–IV, 5·5:8:5:7·5 mm.

Ocular tubercle directed forwards, terminating in a sharp point, granular. Anterior margin of carapace demarcated by a transverse furrow, and provided on each side of the ocular tubercle with 1 forwardly directed tooth. Surface of carapace, scute, and the free tergites of abdomen uniformly covered with fine and close granulation. Carapace behind the ocular tubercle with about 6 scattered tubercles, similar to those forming a transverse row on each of the clearly defined areas of the scute and the free tergites of the abdomen. Free sternites of the abdomen each with a transverse row of granules.

Surfaces of coxae I–IV sparsely and irregularly granular; anterior margin of coxa I with scattered coarse tubercles; coxa II at its posterior apex and coxa IV at its anterior apex provided with a group of tubercles, coxa IV in addition with a row of tubercles along its posterior margin which is absent in the other coxae.

Chelicerae: segment I with a clearly defined apical enlargement dorsally which is provided with 1 outer basal and 2 inner apical teeth; segment II smooth anteriorly. Palps: trochanter above with 3 and below with 1 tooth; femur above with a longitudinal row of 10–11 teeth, apically on each side of it 2–3 teeth, apically on inner side with 2 teeth, and below with a complete longitudinal row of 7 blunt, forwardly bent teeth of equal size; patella to tarsus smooth above; patella apically on inner side with 1 blunt tooth; tibia below on inner side with 5, on the outer side with 7 blunt teeth; tarsus below on the inner side with 4, on the outer side with 5 blunt teeth. Legs (including leg I) unarmed, sparsely granular as far as the tibia; tarsal segments 2·3:3·3; terminal section of tarsus I consisting of 1, tarsus II of 2 segments.

*Colour* of body and appendages uniformly reddish yellow, nowhere reticulated with black.

Windhuk, South West Africa, 1 ♂. Collected by Werner, 1925. Type in the collection of Dr. Roewer, No. 1296/38.

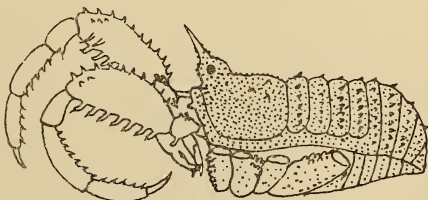


FIG. 89.—*Ceratomontia wernerii* Roewer. ♂: seen from the side.



*Adaeum hewitti* Roewer.

(Text-fig. 90.)

1931. Roewer, Zeitschr. für wissenschaftl. Zoologie, Bd. 138, p. 175, fig. 25.

The following is a translation of Roewer's description.

*Dimensions*.—Length of body 4; legs I–IV, 4·5:7·5:5:7 mm.

Ocular tubercle rounded closely and irregularly covered with papillae; anterior margin of carapace closely beset with long papillae of which the middle is the largest. Surface of carapace and scute together with the free tergites closely and irregularly covered with papillae, of which a median pair of blunt conical tubercles is outstanding on areas I–IV, a transverse row of 9–11 similar tubercles on the posterior margin of scute (=area IV) and free tergites of abdomen. Free sternites of abdomen irregularly granular, surfaces of coxae



FIG. 90.—*Adaeum hewitti* Roewer. ♂: seen from the side.

I–IV thickly covered with papillae, which on the anterior margin of coxa I, at the posterior apex of coxa II, and the anterior apex of coxa IV are stouter than in the remaining surfaces of the coxae. Chelicerae with both segments granular, segment I in addition armed dorsally with 1 tooth. Palps thickly covered with papillae, of which

only the inner side of the femur and the lower sides of patella, tibia, and tarsus remain free; trochanter below with 1 tooth, femur below with 2 (1 basal, 1 middle), apically on the inner side with 1, above with a longitudinal row of 5 teeth; patella below on the inner side with 2 teeth; tibia and tarsus on each side below with 3 teeth. Legs as far as tibiae thickly covered with papillae, trochanters in addition posteriorly and anteriorly with 1–2 teeth, femur with a longitudinal row of teeth both below and above. Tarsal segments 3: 7–8: 4: 4 (juvenile 2: 2: 3: 3); terminal section of tarsus I consisting of 2, tarsus II of 3 segments.

*Colour* of body and appendages a dirty dark brown.

Grahamstown, South Africa, 1 ♂, 1 juvenile. Collected by the Rev. R. Godfrey. Types in the British Museum, London.

I N D E X.

A		D	
	PAGE		PAGE
Acropsopilionidae . . . . .	469	damaranus (Cryptopygoplus) . . . . .	362
Acumontia . . . . .	420	denticelis (Graemontia) . . . . .	415
Adaeidae . . . . .	424	dentifer (Larifuga) . . . . .	451
Adaeinae . . . . .	424	dentifrons (Amatola) . . . . .	387
Adaeulum . . . . .	426	Dyspnoi . . . . .	469
Adaeum . . . . .	435		
africanus (Cryptopygoplus) . . . . .	361		
africanus (Oonopsopilio) . . . . .	470		
Amatola . . . . .	386		
areolatum (Adaeulum) . . . . .	432		
argasiformis (Speleosiro) . . . . .	348		
argasiformis (Speleosiro) n. sp. . . . .	503		
asper (Polycoryphus) . . . . .	365		
asperatum (Adaeum) . . . . .	436		
Assamiidae . . . . .	357		
Assamiinae . . . . .	360		
ater (Rhampsinitus) . . . . .	478		
atra (Monomontia) . . . . .	417		
australis (Neopilio) . . . . .	474		
Austromontia . . . . .	398		
Austronuncia . . . . .	411		
B		E	
bettoni (Rhampsinitus) . . . . .	478	echinodorsum (Rhampsinitus) . . . . .	500
Biacumontia . . . . .	403	Erecanana . . . . .	353
Biantinae . . . . .	353	Erecananinae . . . . .	353
bicolor (Adaeulum) . . . . .	433	Eupnoi . . . . .	472
bifidens (Graemontia) . . . . .	414		
C		F	
calcarata (Larifuga) . . . . .	456	filipes (Metabiantes) . . . . .	353
caledonica (Austromontia) . . . . .	402	filipes (Rhampsinitus) . . . . .	478
capense (Cryptadaeum) . . . . .	445	fissidens (Biacumontia) . . . . .	410
capense (Metadaeum) . . . . .	444	flavidus (Rhampsinitus) . . . . .	486
capensis (Austromontia) . . . . .	400	fluvialis (Ceratomontia) . . . . .	372
capensis (Ceratomontia) . . . . .	375		
capensis (Larifuga) . . . . .	457		
capensis (Rhampsinitus) . . . . .	478		
capensis (Rostromontia) . . . . .	394		
cavernicola (Speleomontia) . . . . .	422		
Ceratomontia . . . . .	370		
cheliplus (Ceratomontia) . . . . .	504		
cornuta (Biacumontia) . . . . .	406		
Cosmetidae . . . . .	352		
coxidens (Adaeulum) . . . . .	430		
crassus (Rhampsinitus) . . . . .	495		
cristatus (Rhampsinitus) . . . . .	489		
Cryptadaeum . . . . .	445		
Cryptobunus . . . . .	396		
Cryptopygoplus . . . . .	360		
Cyphophthalmi . . . . .	345		
		G	
		godfreyi (Adaeulum) . . . . .	428
		Gonyleptidae . . . . .	352
		Graemontia . . . . .	413
		granarius (Rhampsinitus) . . . . .	501
		granulifer (Rostromontia) . . . . .	391
		granulosa (Larifuga) . . . . .	453
		granulosum (Adaeum) . . . . .	441
		H	
		hewitti (Adaeum) . . . . .	506
		hewitti (Ceratomontia) . . . . .	376
		Hinzuanus . . . . .	356
		hispidus (Rhampsinitus) . . . . .	499
		I	
		illustrans (Purcellia) . . . . .	346
		inermis (Roeweria) . . . . .	385
		irregularis (Ceratomontia) . . . . .	378
		J	
		jeanneli (Metabiantes) . . . . .	353
		K	
		karrooensis (Ceratomontia) . . . . .	373
		L	
		lalandei (Rhampsinitus) . . . . .	494
		Laniatores . . . . .	351

	PAGE		PAGE
Larifuga . . . . .	450	Purcellia . . . . .	346
latens (Adaeum) . . . . .	438	pusulosus (Metabiantes) . . . . .	355
leighi (Metabiantes) . . . . .	356		
leighi (Rhampsinitus) . . . . .	497	Q	
leighi (Spinibiantes) . . . . .	356	quadrispina (Rhampsinitus) . . . . .	478
lettowi (Rhampsinitus) . . . . .	478		
levis (Rhampsinitus) . . . . .	487	R	
liposoma (Rostromontia) . . . . .	392	ratrayi (Monomontia) . . . . .	418
littoralis (Rhampsinitus) . . . . .	480	ratrayi (Paradaeum) . . . . .	466
Lomanius . . . . .	353	Rhampsinitus . . . . .	475
longipalpis (Rhampsinitus) . . . . .	483	rhodesianus (Cryptopygoplus) . . . . .	363
		robustus (Sclerobunus) . . . . .	394
M		Roveria . . . . .	384
maximus (Metabiantes) . . . . .	356	Rostromontia . . . . .	388
melanophora (Mensamontia) . . . . .	383	rugosa (Larifuga) . . . . .	451
Mensamontia . . . . .	381	rugosum (Micradaeum) . . . . .	448
meraculus (Metabiantes) . . . . .	355		
Metabiantes . . . . .	354	S	
Metadaeum . . . . .	444	scabra (Namutonia) . . . . .	358
Micradaeum . . . . .	448	Sclerobunus . . . . .	394
minor (Ceratomontia) . . . . .	374	setifemur (Cryptobunus) . . . . .	396
minor (Rhampsinitus) . . . . .	496	setosa (Ceratomontia) . . . . .	379
Monomontia . . . . .	416	silvatica (Austromontia) . . . . .	398
Montadaeum . . . . .	464	silvatica (Rhampsinitus) . . . . .	491
montana (Larifuga) . . . . .	459	Sironidae . . . . .	346
montanus (Rhampsinitus) . . . . .	478	Sironinae . . . . .	346
morulifera (Mensamontia) . . . . .	382	spatulatum (Adaeum) . . . . .	439
		Speleomontia . . . . .	422
N		Speleosiro . . . . .	348
Namutonia . . . . .	357	spenceri (Rhampsinitus) . . . . .	498
natalense (Adaeum) . . . . .	426	Spinibiantes . . . . .	353
natalensis (Acumontia) . . . . .	420	spinifrons (Rhampsinitus) . . . . .	478
Nemastomatidae . . . . .	469	spinipalpis (Astronuncia) . . . . .	411
Neopilio . . . . .	473	squamatum (Adaeum) . . . . .	442
Neopilioninae . . . . .	473	Styllocellinae . . . . .	346
niger (Rhampsinitus) . . . . .	478		
		T	
O		tabulae (Ceratomontia) . . . . .	371
obtectum (Adaeum) . . . . .	437	telifrons (Rhampsinitus) . . . . .	497
Ogoea . . . . .	346	transvaalicus (Rhampsinitus) . . . . .	493
Oncopodidae . . . . .	352	Trienobuninae . . . . .	366
Oonopsopilio . . . . .	470	Trienonychidae . . . . .	366
		Trienonychinae . . . . .	366
P		Trionyxellinae . . . . .	357
pachylomerus (Rhampsinitus) . . . . .	478	Trogulidae . . . . .	469
Palpatores . . . . .	468	truncata (Rostromontia) . . . . .	389
Paradaeum . . . . .	466	truncatidens (Biacumontia) . . . . .	408
paucidens (Biacumontia) . . . . .	404		
Phalangiidae . . . . .	473	U	
Phalangiinae . . . . .	475	unicolor (Rhampsinitus) . . . . .	485
Phalangodidae . . . . .	353		
Phalangodinae . . . . .	353	V	
pictus (Rhampsinitus) . . . . .	478	vittatus (Rhampsinitus) . . . . .	482
Polycoryphus . . . . .	365		
Pungoica . . . . .	357	W	
Pungoicella . . . . .	357	weberi (Larifuga) . . . . .	461
purcelli (Montadaeum) . . . . .	464	wernerii (Ceratomontia) . . . . .	505
		Wintonia . . . . .	360